



REPORT

ON THE

Health of the County Borough of Bootle
for the Year Ending Dec. 31st, 1907,

BY

W. NAYLOR BARLOW,

M.R.C.S. (Eng.), L.R.C.P. (Lond.), D.P.H. (Camb.),

OF LINCOLN'S INN, BARRISTER-AT-LAW.

Medical Officer of Health of the Borough.

Medical Superintendent of the Corporation Hospital for Infectious Diseases.

Surgeon to the Police Force and Fire Brigade.



BOOTLE :

BOOTLE TIMES, LIMITED, 30, ORIEL ROAD.

1908.

HEALTH COMMITTEE
OF THE
BOOTLE TOWN COUNCIL,
1907-8.

*MR. ALDERMAN CAIN, J.P., Chairman.

*MR. ALDERMAN WILD, J.P., Deputy-Chairman.

*MR. COUNCILLOR BARBOUR.

MR. COUNCILLOR BOOTH.

*MR. COUNCILLOR CROMIE.

*MR. COUNCILLOR DUTHIE.

*MR. COUNCILLOR ELLISON.

MR. COUNCILLOR F. W. KING.

*MR. COUNCILLOR McCORMACK, M.R.C.S.

MR. COUNCILLOR JOHNSON.

*MR. COUNCILLOR ROBERTS, L.R.C.P.

MR. COUNCILLOR SHORT.

MR. COUNCILLOR WATSON,

AND

HIS WORSHIP THE MAYOR (MR. COUNCILLOR PEARSON).

* Members of the Hospital Sub-Committee

Officials of the Public Health Department.

Medical Officer of Health :

W. NAYLOR BARLOW, M.R.C.S. (Eng.), L.R.C.P. (Lond.), D.P.H. (Camb.)
BARRISTER-AT-LAW.

Assistant Medical Officer of Health and Inspector of Nuisances :

W. DALEY, L.R.C.P. (Edin.), D.P.H. (Lond.)

Inspectors under the Sale of Food and Drugs Acts :

W. DALEY.		*R. J. McCULLOCH.
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Sanitary Staff :

*R. J. McCULLOCH.		*H. V. SMITH.
H. OWENS.		J. LOBB (Disinfecting Workman).
J. WALL.		

Clerical Staff :

F. RYDER.		R. MORLEY.
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Lady Sanitary Inspector and Inspector under the Midwives Act :

*Miss ADA STOTT.

Lady Health Visitor :

Miss PILGRIM (resigned in June).

June—December, *Mrs. McKOWEN.

Those marked * are Certified Inspectors.

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Ward map with statistics at end of report.

PUBLIC HEALTH DEPARTMENT,

EGREMONT, CHESHIRE,

May 18th, 1908.

*To the Mayor, Aldermen and Councillors
of the County Borough of Bootle.*

GENTLEMEN,

I have the honour to submit herewith my Seventh Annual Report on the Health of the Borough, in compliance with the requirements of the Local Government Board.

Owing to my removal from the town, the Report has been compiled under somewhat disadvantageous circumstances.

I am pleased that, in the last year of my tenure of office of Medical Officer of Health, the vital statistics should be of so favourable a character. The gross death-rate was much the lowest on record, as also was the Infant Mortality rate; and these rates compare very favourably with the corresponding rates for the whole of England and Wales.

I should like to place on record for the last time my cordial appreciation of the kindness and courtesy with which I was always treated by the Members of the Council generally, and the Members of the Health Committee in particular, and for the consideration and support they invariably gave to my suggestions and recommendations.

I have also to thank the Members of my Staff, both at the Hospital and the Town Hall, for their kind co-operation at all times. A large amount of useful work has been accomplished without the slightest suggestion of friction. This could not have been done so successfully and effectually if I had not received their whole-hearted support.

I also desire to thank the Town Clerk and the other officials for the assistance which they so willingly gave me whenever called upon.

I am, Gentlemen,

Your obedient servant,

W. N. BARLOW,

Medical Officer of Health.

STATISTICAL SUMMARY FOR 1907.

Area in Acres	...	...	...	...	...	...	1,946
Estimated Population, June, 1907	...	...	...	...	...	...	69,200
Population per Acre (excluding Dock Estate)	...	...	...	...	...	...	43
No. of Houses in Borough	...	...	...	...	...	...	13,548
Rateable Value	...	...	...	...	...	...	£560,706
1d. in the £ yields for General District purposes	...	...	...	...	...	...	£1,631 7s.
No. of persons per house at time of last Census	...	...	...	...	...	...	5·8
Birth Rate per 1,000 living	...	...	...	...	...	...	31·3
Death Rate	..	...	...	...	...	...	15·7
Infantile Mortality per 1,000 births	...	...	...	...	...	...	123
Percentage of uncertified deaths	...	...	...	...	...	...	2·5
Total deaths from Diarrhœa	...	.	...	...	...	...	41
Diarrhœa Mortality per 1,000 births	...	...	...	...	...	...	18
Phthisis Death Rate per 1,000 living	...	...	...	...	...	...	1·1
Respiratory	..	..	...	..	...	...	3·5

BOROUGH OF BOOTLE.

ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH

TO THE .

HEALTH COMMITTEE.

POPULATION.

The estimated population of Bootle in June, 1907, was 69,200.

The area is 1,946 acres.

The population shown by the last three census returns has been :—

1881.		1891.		1901.
27,374	...	49,217	...	58,556

The estimate of the population by the Registrar General is only 67,114. I have previously pointed out in these reports that the population of any place is estimated by the Registrar General on the assumption that the rate of annual increase since the last census is the same as that which obtained between the last two census years. This method takes no note whatever of purely local circumstances which may affect the growth of a town, and is especially liable to be inaccurate in places which have sprung up rapidly. To give an example, the Registrar General in estimating the population of Orrell,

would estimate the same rate of increase since 1901, as obtained in the 10 years between 1891 and 1901. As a matter of fact since 1901, the population of Orrell has probably increased three-fold, and this fact will account for the difference between my estimate of the present population of Bootle, and that of the Registrar General. The estimate for the population of Orrell for 1905 by Dr. Bradshaw was 3,500.

Having in view a somewhat excessive number of empty houses in Orrell towards the end of the year, I have not added anything to the estimated population of 1906, which was 3,850.

My estimate for the population of the various wards on which the statistics are based is only a rough approximation founded on the natural increase, as shown by the birth and death returns, and the number of new houses built in the several wards.

Table shewing Houses certified for habitation since the last census :—

		Wards of the Borough.												Total.	
		Derby.	Stanley.	Mersey.	Knowsley.	Linaere.	Orrell.								
April 1901—April 1902	...	110	...	—	...	8	..	—	...	169	...	—	...	287	
„ 1902	„ 1903	...	126	...	28	...	—	...	—	...	85	...	—	...	239
„ 1903	„ 1904	...	91	...	28	...	—	...	30	...	132	...	—	...	281
„ 1904	„ 1905	...	135	...	76	...	—	...	1	...	143	...	—	...	355
„ 1905	„ 1906	...	278	...	52	...	—	...	—	..	214	...	—	...	544
„ 1906	„ 1907	...	190	...	25	...	—	...	—	...	110	...	*26	...	351
„ 1907	„ 1908	...	73	...	64	...	1	...	—	...	51	...	11	...	200

* Included in Borough for first time.

The population per house at the last census was 5·8.

The following table gives the area of each ward :—

	Area excluding Dock Estate.		Area including Dock Estate.
Derby.....	451 acres	...	451 acres.
Stanley.....	235 „	...	235 „
Mersey	174 „	...	312 „
Knowsley	176 „	...	306 „
Linaere.....	203 „	...	272 „
Orrell	370 „	...	370 „
	<u>1,609</u>		<u>1,946</u>

Approximate population of the Borough at the undermentioned age periods on an estimated population of 69,200.

Under 1 year	1,916
1 year and under 5	6,623
Total under 5	— 8,539
5 years and under 15... ..	14,939
15 „ „ 25... ..	14,145
25 „ „ 45... ..	19,802
45 „ „ 65... ..	9,973
65 „ and upwards	1,802
	<hr/>
	69,200
	<hr/>

BIRTHS.

The number of children born in Bootle during 1907 was 2,168—1,120 males, 1,048 females.

The birth rate is therefore 31·3 per 1,000, which is ·6 per 1,000 lower than last year, but 5·0 per 1,000 in excess of that of England and Wales. As a whole considering the way in which the birth rate of the country generally has declined during the past few years, the position of Bootle in this respect may be looked upon as fairly satisfactory.

In former reports I have referred to some disadvantages which follow from the long time which elapses between the birth of the child and the obligation to register its birth.

These disadvantages will be removed by the Notification of Births Act, which has been adopted by your Council and which will come into force early in January. By this Act it will be compulsory on the person in attendance on a woman during child-birth to notify the birth to the Medical Officer of Health within 36 hours of its occurrence. By the Act still births have also to be notified. The Act will be found very useful in Bootle not only by reason of the fact that the Medical Officer of Health will get early information of the births that occur and will thus be able to give instruction as to feeding &c. of the babe, and enquire into the cleanly condition of the home, but it will also act as a very efficient check on the work of the midwives.

The following table shows the number of births in each of the four quarters of the year, and their distribution among the different wards :—

Ward.	1st Quarter.		2nd Quarter.		3rd Quarter.		4th Quarter.		Total.
Derby	93	...	128	...	91	...	127	...	439
Stanley.....	59	...	64	...	71	...	55	...	249
Mersey	106	...	95	...	95	...	81	...	377
Knowsley.....	107	...	102	...	105	...	116	...	430
Linacre.....	119	...	135	...	144	...	130	...	528
Orrell...	38	...	27	...	41	...	39	...	145
<hr/>									
Entire Borough	522	...	551	...	547	...	548	...	2,168

The number of illegitimate births was 22 or 1 per cent of the total number of births. They were divided among the wards as follows :—

Derby.	Stanley.	Mersey.	Knowsley.	Linacre.	Orrell.	
3	...	3	...	5	...	8
...	...	5	...	8	...	5
·6%	...	1·2%	...	1·3%	...	1·8%
...	...	1·3%	...	1·8%	...	·9%
...	...	0	...	0	...	0
of total births						
in each ward.						

Table shewing natural increase or decrease of the population, *i.e.*, the increase or decrease in the number of births over deaths in the different wards :—

Ward.	Births.		Deaths.		Excess of Births over Deaths.	Excess of Deaths over Births.
Derby	439	...	185	...	254	...
Stanley.....	249	...	134	...	115	..
Mersey.....	377	...	255	...	122	...
Knowsley.....	430	...	234	...	196	...
Linacre.....	528	...	230	...	298	...
Orrell.....	145	...	52	...	93	...
<hr/>						
Entire Borough.....	2,168	...	1,096	...	1,078	...

DEATHS.

The deaths of non-residents who died in the Borough (39 in number), principally in the Borough and Linacre Hospitals, are excluded, while the deaths in the workhouses of the West Derby Union of people who are said to be Bootle residents (137 in number) are included. There is no doubt that the

only claim which many of the last-mentioned class have to be styled Bootle residents lies in the fact that they slept in the Borough immediately prior to their admission to the workhouse, some doubtless having been attracted to the town by the chance of obtaining casual labour at the docks. These deaths materially increase the death rate.

The total number of deaths during the year was 1,090 (582 males, 508 females), equal to a death rate of 15·7 per 1,000, only ·7 more than the death rate for England and Wales as a whole.

Table shewing number of deaths in each ward :—

Ward.	1st Quarter.		2nd Quarter.		3rd Quarter.		4th Quarter.		Total.
Derby	54	...	46	...	36	...	49	...	185
Stanley	36	...	31	...	26	...	41	...	134
Mersey	78	...	45	..	63	...	69	...	255
Knowsley	62	...	48	...	56	...	68	...	234
Linacre	59	...	54	...	51	...	66	...	230
Orrell	16	...	8	...	10	...	18	..	52
Entire Borough	305		232		242		311		1,090

The death rate is much the lowest on record, being 1·6 below the record rate of last year, and having regard to the fact that Bootle is densely populated in every part, and taking into consideration also the general character of the population, the large amount of casual labour and the comparatively high birth rate, 15·7 per 1,000, is a very low death rate.

Non-certified deaths this year number 28, the same number as last year. Of these 12 died under the age of 1 year.

It is my duty to repeat the opinion I expressed in my last two Annual Reports with regard to death registration. Any system of death registration which admits the possibility of the registration of the death of a living person, and in addition allows laymen to ascribe the cause of death on the information of third parties in cases which number thousands in the year throughout the whole country, is in need of reform. The defects of the present system render it a comparatively easy matter to put an end to the existence of the lives of children not wanted. 9 of the deaths were of illegitimate children, 8 of whom died in the first 12 months of their lives. On page 10 it will be seen that the illegitimate births numbered 22. Comment on these figures is unnecessary. During the year 2 deaths were registered as being due to "overlying."

INFANT MORTALITY.

During the year 1907, 268 children died who had, at the time of their deaths, not reached one year of age.

This gives an Infantile Mortality Rate of 123 per 1,000 Births, one of the lowest rates in any of the Lancashire towns. The Infant Mortality Rate for the whole of England and Wales for 1907 was 118.

Although the General Death Rate of England and Wales has been steadily decreasing, the Infantile Mortality Rate stands as high as it did 50 years ago in spite of improved sanitation.

Decennial Period.	Mortality of Infants under One Year per 1,000 Births.		
1861—70	154
1871—80	149
1881—90	142
1891—1900	151

From remarks which are occasionally made, it would appear that in some people's minds Infant Mortality is synonymous with Summer Diarrhœa. Others look upon a high rate of Infant Mortality as an evidence of insanitation. When we look, however, at the factors concerned in causing high Infant Mortality Rates, we see that Summer Diarrhœa is but one of many factors, and that the influence of insanitation on the Infant Mortality Rate is apt to be exaggerated.

Another point which has not been grasped fully is that the conditions attending the cause of a high rate of Infant Mortality differ in different places. For instance, in some parts of the country, the fact that women both before and after child-birth work in factories is a most important factor, whilst in Bootle for instance there is very little work for women. Again in many places, particularly shipping ports, casual labour exists to a large extent, and this is always associated with poverty and a high rate of Infant Mortality, while in other towns casual labour does not exist to anything like the same extent. It follows, therefore, that while in the main the causes of Infant Mortality are the same, a particular remedy for a particular condition will only be referable to particular places. An examination of the five main

sub-divisions as seen in the table relating to Infant Mortality on page 64 of this Report, shows that of the 268 deaths under the age of one year recorded in Bootle last year were —

(1) Common Infectious Diseases	...	...	...	caused 14 deaths
(2) Diarrhœa	...	...	...	„ 47 „
(3) Wasting Diseases (including Premature Births 46, and Atrophy and Debility, 33 deaths)	...	...	...	„ 79 „
(4) Tubercular Diseases	...	...	...	„ 8 „
(5) Other causes (including Respiratory Diseases and Convulsions)	...	...	...	„ 110 „

The remarks on Infant Mortality generally, contained in my last Report, may prove interesting to the new members of the Council, and refresh the memories of those to whom the subject is of interest. I therefore take the liberty of reprinting a portion thereof.

What are some of the conditions which cause a high rate of Infant Mortality ?

- (1) Ignorance.
- (2) Poverty.
- (3) Antenatal conditions in the mother.
- (4) Drunkenness in the parents.
- (5) Mothers going out to work.
- (6) Untrained midwifery.

If asked to point out one predominant cause for a high rate of Infant Mortality, probably nine out of ten people would at once say ignorance. Ignorance undoubtedly is a tremendous factor in causing deaths from diarrhœa. Probably half of the number of deaths described to “Atrophy and Debility” may be accounted for by the ignorance of the mothers in regard to the feeding of their offspring, and the other half to antenatal conditions, perhaps outside their control, but possibly in part due to ignorance also. Ignorance as to the ordinary precautions necessary for the isolation and home treatment of children suffering from such diseases as measles, whooping cough, common colds and sore throats, would account for a large number of the deaths under the head of “All other causes, including Respiratory Disease and Convulsions.” We thus see that a predominating factor in causing a high rate of mortality among infants is ignorance of the elementary laws of health and hygiene.

The education of the people was certainly not amongst the duties, as originally conceived, of a Health Authority, but Health Authorities have been alert and active. They have investigated the causes of Infant Mortality, and have done their best to remedy the defects found, there being no other Authority to perform these duties. For instance, most municipalities have engaged lady Health Visitors, whose duties in the main are educative. They distribute leaflets and give instruction at the homes of the people on very elementary points in domestic hygiene and the feeding of infants. Medical Officers have pointed out again and again the necessity for teaching the elementary laws of hygiene to the older girls in elementary schools. As I have said these were not the original duties of the Health Department, but because undertaken by the Health Department the public have come to the conclusion that the high rate of Infant Mortality must of necessity be due to insanitation. There is one thing, however, which I think has a material influence on the rate of Infant Mortality, and that is the lack of that professional advice which many children ought to receive when ill. This is especially noticeable in such diseases as Measles and Whooping Cough. Medical advice is supposed to be within the reach of everyone. When people cannot afford to pay for a doctor it is commonly supposed to be an easy matter for them to obtain medical attention free. In actual practice it is not always so, and my experience in Bootle is that in the majority of cases of Measles, Whooping Cough, Itch, Skin Diseases, Ophthalmia, and the other so-called minor diseases, the children do not receive medical attention at all, and the only advice many of them receive is that given by the Lady Sanitary Inspectors, which is, after all, not medical advice.

When giving evidence before the Royal Commission appointed to enquire into and report on the Poor Law and Relief of Distress, I drew attention to this state of affairs, and the probable effect it had in raising the Infant Mortality Rate. The effect of this want of proper medical attention can be traced, not only in the actual number of deaths of infants, but in the development of Phthisis, Blindness, &c., in after-life. Many suggestions were made to the Royal Commission for remedying this difficulty, and it is to be hoped that amongst them they will be able to recommend one which will meet with general approval, and be of benefit to the community.

During the year a Society of Voluntary Health Visitors has been founded in Bootle. The object of the Society may be shortly described as supplementary to the efforts of the Lady Sanitary Inspectors. The members undertake to visit at the homes of the poor where births have recently taken place and to

advise and encourage mothers in the breast feeding of their infants. In connection with the Society a fund has recently been formed for the purpose of relieving the urgent necessities of the very poorest parturient women and of providing the infant with clothing. Some such relief was urgently required in the Borough, and if due care is exercised in the dispensing of this relief and is strictly limited in character, the beneficial work of the Society will be extended.

As having some bearing on Infant Mortality I may here refer to the Home Office Conference which took place in November last. It has generally been assumed that work in factories &c. is harmful to pregnant women and to their offspring when born.

At the last Conference on Infant Mortality a resolution was passed urging the Government to lengthen the period before and after child-birth during which women should *not* be allowed to work.

The Home Office, having regard to certain economic aspects of the change proposed in the resolution, and having regard also to the fact that several observers have doubted the accuracy of the assumption above referred to, before initiating legislation, decided to make further enquiries into the subject and for that purpose called a Conference of Medical Officers of Health to discuss the matter. The meeting decided that it would be necessary, in order to attain the object in view, to enquire very fully into the fate of *all* children born during the year 1908 in certain parts of towns, and living under the same conditions, not only of the children of factory workers, but also, for the purpose of comparison, of the children of women who did not go out to work. The meeting also decided upon the scope of the enquiry and drew up a form of enquiry which will be used throughout the country so that the results obtained will be uniform. A supply of the forms has been obtained for use in this Borough.

The Rates in the different Wards for the past six years are :—

	1901.		1902.		1903.		1904.		1905.		1906.		1907.
Derby	127	...	127	...	151	...	152	...	159	...	112	..	104
Stanley.....	127	...	113	...	197	...	162	...	148	...	129	...	64
Mersey.....	277	...	199	...	166	...	234	...	179	...	169	...	183
Knowsley....	194	...	163	...	168	...	183	...	137	...	181	...	125
Linaere.....	145	...	150	...	136	...	158	...	146	...	140	...	113
Orrell	—	...	—	...	—	...	—	...	232	...	100	...	158

Table shewing influence of Summer Diarrhœa on Infantile Mortality :—

	No. of deaths of children under 1 year.						Infant Mortality Rate.	
	1905	1907					1905	1907
1st Quarter....	75	57	...	...	...	...	137	109
2nd Quarter...	59	56	...	...	...	...	105	101
3rd Quarter...	102	72	(Summer Diarrhœa prevalent)				196	131
4th Quarter...	76	83	...	...	...	..	139	151

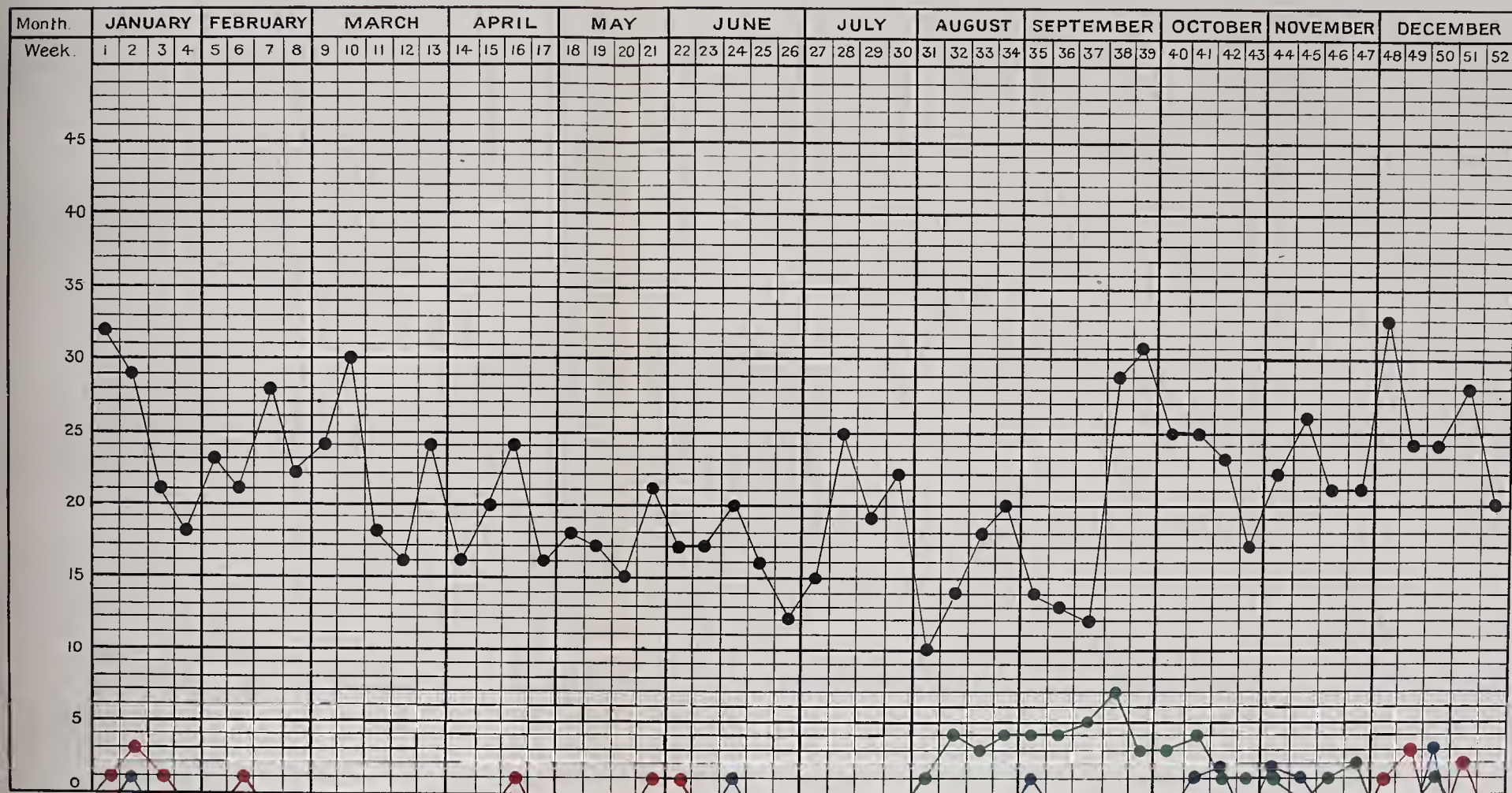
The Infant Mortality Rates are always highest in those parts of a town in which the least prudent, and the most ignorant of the people, live.

The weather in the months of July and August was very cold and wet, conditions unfavourable for a high mortality from Diarrhœa, and in fact the number of deaths was exceedingly small. September, however, was hot and dry, and this to some extent prolonged the “Diarrhœa Season,” consequently deaths from that disease were fairly numerous and continued to be notified much later in the year than usual.

Table shewing Infantile Mortality and Diarrhœa deaths :—

	Infantile Deaths.	Infantile Mortality Rate per 1,000 Births.	Deaths from Diarrhœa.	Rate per 1,000 of Population.
1893	351	197	131	2·5
1894	262	157	45	·8
1895	335	183	107	2·0
1896	324	184	72	1·3
1897	349	199	153	2·8
1898	329	183	114	2·0
1899	337	186	146	2·6
1900	373	204	139	2·4
1901	337	183	113	1·9
1902	302	154	53	·8
1903	325	161	85	1·4
1904	346	180	109	1·7
1905	311	153	87	1·3
1906	312	143	83	1·2
1907	268	123	41	·5

CHART SHOWING NUMBER OF DEATHS FROM ALL CAUSES EACH WEEK IN 1907, ALSO THE NUMBER OF DEATHS FROM ZYMOTIC DISEASES,
AND FROM EPIDEMIC DIARRHŒA.



Note. BLACK LINE—Number of deaths from all causes.
RED LINE—Number of deaths from Measles.
GREEN LINE—Number of deaths from Diarrhœa.
BLUE LINE—Number of deaths from Whooping Cough.

ZYMOTIC DEATH RATE.

Table shewing number of deaths from Zymotic diseases since 1896 :—

	1896.	1897.	1898	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.
Smallpox	...	—	...	—	...	—	...	4	...	6	...	—
Scarlet Fever	...	20	...	12	...	10	...	17	...	16	...	14
Diphtheria	...	7	...	5	...	8	...	10	...	10	...	11
Measles	...	31	...	14	...	7	...	6	...	21	...	5
Whooping Cough	15	...	14	...	28	...	21	...	56	...	6	...
Enteric	24	...	20	...	17	...	10	...	16	...	12
Typhus	—	...	—	...	7	...	1	...	—	...	2
Diarrhœa	...	72	...	153	...	114	...	46	...	139	...	113
Totals	...	169	...	218	...	191	...	104	...	259	...	165
Rate per 1,000	...	3.1	...	3.9	...	3.4	...	1.8	...	4.5	...	2.8

INFECTIOUS DISEASES.

The number of infectious diseases notified during 1907 shows a large decrease over those notified during the previous year. The increase is mainly accounted for by the decrease in the number of cases of Scarlet Fever, the incidence of which disease was especially low during the early part of the year, and also to the decrease in the number of cases of Diphtheria, 52 compared with 74.

For further information regarding the number of cases of Infectious Disease notified during the year, and the Wards in which the cases occurred, see page 62.

The following table shows the number of notifications in each quarter of the year, 1907 :—

		1st Quarter.		2nd Quarter.		3rd Quarter.		4th Quarter.		Total.
Smallpox	0	...	0	...	0	...	0	0
Scarlet Fever	46	...	69	...	80	...	62	257
Diphtheria	17	...	6	...	11	...	18	52
Enteric Fever	7	..	9	...	18	...	8	42
Continued Fever	0	...	0	...	0	...	0	0
Typhus Fever	0	...	0	...	0	...	0	0
Erysipelas	9	...	3	...	6	...	14	32
Puerperal Fever	2	...	0	...	2	...	0	4
Phthisis	0	...	2	...	2	...	3	7
Totals		...	81	...	89	...	119	...	105	394

N.B.—The Chart opposite shows the number of infectious cases reported each week throughout the year.

Table showing number of notifications of Infectious Diseases since 1897.

	1897.	1898.	1899.	1900	1901.	1902.	1903.	1904.	1905.	1906.	1907.							
<i>Population</i>	54,630	55,550	56,500	57,450	58,556	60,000	60,800	62,000	63,134	68,000	69,200							
Smallpox	—	...	—	...	3	...	1	..	25	...	122	...	—	...	—	...	—
Scarlet Fever	...	245	...	263	...198	...270	...285	...321	...	353	...268	...289	...	338	...	257		
Diphtheria in- cluding Croup ..	21	...	21	... 45	... 24	... 64	... 34	...	33	...	48	..	78	...	74	...	52	
Typhus Fever	...	7	...	36	... 1	.. —	... 12	... 15	...	—	...	—	...	—	...	—	...	—
Continued Fever...	—	...	—	...	—	...	—	...	—	...	1	...	—	...	—	...	—	
Enteric Fever	...	154	... 124	... 77	... 97	... 76	... 62	...	61	...	22	... 24	...	40	...	42		
Puerperal Fever ...	3	...	2	... 3	... 2	... 6	... 1	...	—	...	—	...	—	...	6	...	4	
Erysipelas	...	67	... 41	... 40	... 54	... 51	... 50	..	25	...	39	... 32	...	38	...	32		
Phthisis	...	—	...	—	...	—	...+22	... 21	...	21	... 43	... 22	...	18	...	7		

(6 months.)

+ Phthisis not notifiable until July, 1901.

Out of 351 cases occurring among the classes of disease for which accommodation is provided at Linacre Hospital, 275 or 78 per cent. were removed to hospital. The percentage of removals in 1906 was 86 per cent.

SMALLPOX.

No cases of smallpox were notified during the year, though several persons who had been in contact with the disease on vessels arriving in the Mersey have from time to time been under supervision.

SCARLET FEVER.

As I have previously stated, there is a large decrease in the number of cases of Scarlet Fever notified during the year. The remarkable drop in the incidence of Scarlet Fever at the end of 1906, mentioned in my last report, continued during the first half of the year 1907, with the result that there were 81 fewer cases notified during the year than in 1906. The cases which occurred were also of a very mild type, and as shown by the table on the next page the percentage death rate was consequently exceedingly low. There can be no doubt that one of the reasons why Isolation Hospitals have not been as successful in stamping out infectious disease as was prophesied when the system of isolating cases in hospital came into vogue is the fact that when the type of disease is mild, a large number of cases escape observation, while others, even if they are observed by the parents, are not medically treated, because the patients are never sufficiently ill in the parents' opinion to necessitate the calling in of the doctor, with the result that these cases are never isolated, but play about as usual, and convey the disease to others. I

have again to remark that very often an absolute lack of that ordinary care which common sense would suggest in the matter of isolating patients from the other inmates of the house before removal to hospital can be effected, is shown by the parents, who do not carry out the instructions in that direction, which are, I presume, given by the doctor when he sees the patient. It is a common occurrence for the Inspector when he goes to remove to hospital a child suffering from Scarlet Fever, to find that child playing with or in the same bed as other children not so suffering. This negligence costs the rate-payers a large sum of money in the year, and the parents themselves not a little anxiety.

The cases were distributed among the Wards as follows:—

	Derby.		Stanley.		Mersey.		Knowsley.		Linacre.		Orrell.	
Cases Notified	60	...	41	...	56	...	25	...	51	...	24	
Cases Removed	48	..	22	...	44	...	20	...	46	...	20	

The following table shows the percentage of cases notified as Scarlet Fever removed to Hospital since 1891, with the number of deaths and percentage of deaths to cases.

Year.	Cases Notified.	Cases Notified per 1 000 of Population.			Cases Removed.	Percentage of Removals.			Deaths.	Percentage of Deaths to Notifications.	
1891.....	259	...	5·2	...	29	...	11	...	32	...	12·3
1892.....	289	...	5·7	...	47	..	16	...	32	...	11·0
1893.....	332	...	6·5	...	89	...	27	...	20	...	6·0
1894.....	638	...	12·2	...	195	...	30	...	36	...	5·6
1895.....	300	...	5·7	...	124	...	41	...	14	...	4·6
1896.....	297	...	5·5	...	124	...	41	..	20	...	6·7
1897.....	245	..	4·5	...	133	...	51	...	13	...	4·9
1898....	263	...	4·8	...	162	...	61	...	10	...	3·8
1899.....	198	...	3·5	...	124	...	62	...	10	...	5·0
1900.....	270	...	4·7	...	170	...	62	...	17	...	6·2
1901.....	285	...	4·8	...	202	...	71	...	16	..	5·6
1902....	321	...	5·4	...	259	...	80	...	14	...	4·3
*1903.....	353	...	5·7	...	225	...	63	...	25	...	7·0
1904.....	269	...	4·3	...	210	...	78	...	13	...	4·8
1905.....	289	...	4·5	...	237	...	82	...	32	...	11·0
1906.....	338	...	4·9	...	270	...	79	...	14	...	4·1
1907.....	257	..	3·7	...	200	...	77	...	7	...	2·8

* N.B.— In this year Smallpox was epidemic. As a result the accommodation available for Scarlet Fever was curtailed, and admission was refused to many cases, which otherwise would have gone to hospital.

DIPHThERIA.

In 1907 the number of cases notified was 52, of which number 14 died. The percentage of deaths to cases is thus 26.

The cases occurred in the Wards as under :—

Derby.	Stanley.	Mersey.	Knowsley.	Linaere.	Orrell.
19	13	4	5	8	3

The following table shows the number of Diphtheria cases, number of deaths and percentage of deaths to cases during last 13 years :—

	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.
Number of cases notified, including Croup	27	23	21	21	45	24	64	34	33	48	78	74	52
Number of Deaths including Croup	19	12	11	12	14	10	11	8	9	19	18	11	14
Number of cases admitted to Hospital...	2	8	5	4	12	9	45	25	20	36	48	42	40
Number of deaths in Hospital	—	3	1	2	—	4	7	2	4	12	9	7	7
TRACHEOTOMY—													
Number of Cases	(No Record)				—	3	11	8	4	9	8	11	8
Number of Deaths					—	—	2	—	3	3	3	4	4
*Hospital Mortality	0%	37%	20%	50%	0%	41%	15%	8%	20%	33%	18%	16%	17%
*Outside Mortality	76%	60%	62%	58%	42%	40%	21%	66%	37%	58%	30%	12%	58%

* NOTE.—The numbers dealt with are so small that the percentages are of very little value

For fuller details of Diphtheria cases see the Hospital Report, page 50.

The number of cases notified last year was 22 less than in 1906, and was only slightly in advance of the average for the past 10 years. On the other hand, as so frequently happens when the incidence is low, the type of disease is severe, and the percentage mortality correspondingly high.

From the Registrar General's last report I take the following table :—

Decennium.	Annual Mortality per million persons living, from Diphtheria.
1871—80	121
1881—90	163
1891—1900	263

90,000 units of Antitoxin were given free to practitioners on application, against 96,000 units in 1905. The Antitoxin is kept in small bottles, each containing 2,000 units. 4,000 units is a dose which can safely be given to a very young child. It is a well-established fact that the mortality from Diphtheria depends very largely on the promptness with which the disease is cut short by the use of Antitoxin. The importance of its use at the earliest possible moment need, therefore, hardly be urged here.

Many of the cases were sent into hospital at a very late stage of the disease, when they were thoroughly saturated with the poison, and in a condition which gave little hope of recovery. I have no hesitation in saying that if medical advice had been sought earlier, and the cases removed to the hospital sooner, many lives would have been saved.

TYPHOID FEVER.

The number of notified cases (42) is 2 over that of 1906, and 18 more than in 1905, but this increase is more apparent than real because 6 of the cases were taken from the ships in the Bootle Docks, and the disease was not contracted in the town. I may also point out that of the 39 cases sent to the hospital as typhoid fever 13 were found not to be so suffering. If we exclude these cases, and take the above-mentioned facts into consideration, the number of notifications may be said to be small. Every year during the summer months (the diarrhœa season) quite a number of patients, usually children, are sent to the Infectious Hospital notified as suffering from Typhoid Fever. These patients on admission are found to have a slight rise in temperature and a little diarrhœa. With suitable treatment and dieting nearly all are quite well within a week, often in 2 days. Some of these cases are included in the 13 just mentioned.

This disease is perhaps the most intimately connected of all the infectious diseases with sanitation, and the comparative freedom of the Borough from the disease speaks well for its general sanitary condition.

The 42 notified cases were distributed among the wards as follows:—

Derby Ward.	Stanley Ward.	Mersey Ward.	Knowsley Ward.	Linacre Ward.	Orrell Ward.					
6	...	2	...	5	...	13	...	16	...	0

39 of the cases were removed to hospital.

Enquiries were made in all cases of Typhoid notified as to whether shell fish had been eaten or not, but in no instance was such a history obtained.

TYPHUS FEVER.

No case of Typhus occurred during the past year.

MEASLES.

During 1907 the deaths of 16 children were due to Measles as against 44 in 1906, and 9 in 1905.

The tendency of Measles to become epidemic every second year is well exemplified by the following table.

Table shewing certain statistics with regard to Measles for the last 10 years :—

Year.			Ages at Death.					
			Total. Deaths.	Under 1	1 to 5.	5 to 15.	15 to 25.	25 to 65. over 65.
1897	...	14	...	—	...	14	Deaths under 1 year were not differentiated from the next class until 1900.	
1898	...	7	...	—	...	7		
1899	...	6	...	—	...	6		
1900	...	21	...	8	...	11	...	2
1901	...	5	...	1	...	3	...	1
1902	...	46	...	9	...	35	...	2
1903	...	2	...	1	...	1	...	—
1904	...	48	...	9	..	39	...	—
1905	...	9	...	2	..	7	...	—
1906	...	44	...	2	...	37	...	5*
1907	...	16	...	4	...	12	...	—

*All these children were just over five years of age.

Table shewing mortality from Measles per 1,000 persons living at the undermentioned age groups :—

Below 1.		1 to 5.		5 to 15.		15 to 25.		25 to 65.		over 65.	
2.0	...	1.8	...	0	...	0	...	0	...	0	...

Every case of the disease notified by the School Authorities is visited by the Lady Sanitary Inspector, who gives advice as to isolation and nursing, and leaves a copy of a leaflet with information concerning the disease.

183 Houses where Measles had broken out were thus visited.

Measles was practically absent from the Borough until late in the Autumn (a glance at the table above shows that 1907 happened to be the non-epidemic year). An epidemic then started and the results will be shewn in next year's statistics.

The advice given by the Lady Sanitary Inspectors when visiting these cases in a large majority of the cases is the only advice with regard to isolation and treatment which the parents receive, and there can be no doubt many infants' lives are lost through the neglect or inability of the parents to seek medical advice earlier.

For further comments in connection with this subject I refer you to page 14 *ante*. A good many of the deaths really due to Measles are ascribed to Broncho Pneumonia. This Broncho Pneumonia is often preventable if ordinary care were taken.

The alteration I recommended with regard to the exclusion of children from houses infected with Measles, has worked satisfactorily, and the schools have benefited by increased attendances. The previous custom was to exclude *all* children from school from the house from which Measles was present. My own experience forced me to the conclusion that it was unnecessary to exclude children from school above the age of seven, who had previously suffered from the disease. This recommendation did not receive at first universal approval, but I have since discovered that the practice which I recommended has been adopted in other places, e.g., by the London School Board, and I find that the same practice has obtained in Aberdeen for some years past.

WHOOPING COUGH.

This disease caused 28 deaths last year, equal to a rate of .4 per 1000 the same as in the previous year.

Deaths from Whooping Cough from 1892 : —

	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907
Deaths	6	.. 32	... 22	... 26	... 14	... 14	... 27	... 21	... 56	... 6	... 23	... 16	... 41	... 20	... 30	... 28

Death rates from Whooping Cough per 1,000 of children living, at the following age groups :—

Under 1		1 to 5		5 to 15		15 to 25		25 to 65		over 65
4.6	...	2.5	...	1	...	—	...	—	...	—

Whooping Cough and Measles yearly cause more deaths than all the other infectious diseases taken together. The greatest Mortality from Whooping Cough occurs in the first year of life. The disease is very infectious, but the period of infection is indefinite and variable. Many deaths, doubtless, could be avoided with ordinary care on the part of parents to prevent the children affected taking chills, but it is difficult to suggest any means for reducing the mortality from this disease except by eradicating from people's minds the idea that Measles and Whooping Cough are diseases about which no trouble need be taken and no anxiety felt.

324 cases of Whooping Cough were visited by the Lady Sanitary Inspectors, and a leaflet left which gives instructions as regards isolation and the ordinary measures to be taken. The attendance of a medical man is also urged upon the parents.

Whooping Cough was epidemic in the Infants' departments of St. James' and Salisbury Road Schools, each of which was closed for 3 weeks in consequence thereof.

CASES OF INFECTIOUS DISEASE NOTIFIED BY ELEMENTARY EDUCATION
AUTHORITY TO THE MEDICAL OFFICER OF HEALTH.

1907.

SCHOOL.	Measles.	Chicken Pox	Whooping Cough.	Other Diseases.	TOTAL.
Salisbury Road....	22	10	27	127	186
Hawthorne Road...	3	9	4	4	20
Linacre Lane	46	24	50	18	138
Bedford Road.....	12	20	25	13	70
Gray Street.....	9	19	69	7	84
St. James'.....	3	23	130	32	188
St. Mary's.....	7	8	0	32	47
Christ Church.....	9	9	4	8	30
St. John's.....	6	16	11	52	85
St. Alexander's....	4	2	11	47	64
St. Paul's.....	1	0	0	3	4
St. Winefride's....	34	5	3	70	112
St. Elizabeth's....	11	0	0	6	17
Lander Road.....	1	0	0	1	2
Total.....	168	145	314	420	1,047

CASES VISITED.

	Total No. Visited.		No. found not suffering as reported.			
Measles	183	...	...	...	...	15
Chicken Pox	157	...	...	...	...	16
Whooping Cough..	324	...	...	...	...	33
Other Diseases	450	...	...	...	...	26
<hr/>						
Total... ..	1,114	...	...	...	...	90
<hr/>						

The number of cases visited in 1906 was 1,251.

„ „ „ 1905 was 450.

SCHOOLS.

For several years past, in these reports and elsewhere, I have advocated the medical inspection of school children. This has by Act of Parliament now been made compulsory, and if carried out on sensible lines cannot fail but be of immediate benefit both to the health of the children and community at large.

For some years past I have also advocated the teaching of very elementary hygiene to school children, and some facts connected with the feeding of infants to the elder girls about to leave school, many of whom are often left for considerable periods of time in sole charge of babies while their mothers are working, or for other reasons. Nearly 4 years ago I gave two lectures to teachers with the idea of focussing the kind of information on the above-named subjects my experience led me to perceive would be most useful to the scholars. While most people are agreed that some amount of hygiene ought to be taught in schools, it is often urged against the proposal that the teachers themselves need instruction before they can teach. My view, however, has been all along that the teachers do not need, or ought not to need, any instruction in the very elementary facts necessary to be taught, all that they need is that their attention should be directed to the facts which they ought to teach, most of which will probably already be known to them. One does not want to make teachers and scholars into Sanitary Inspectors. Perhaps the choice of the word "Hygiene" for the teaching required has been unwise, a better term would have been "The very elementary principles of health." As a matter of fact in my opinion it would be a mistake, as well as a waste of time, for the teachers to go too deeply into the subject, because they will be

tempted, when with their classes, to glide over the elementary facts which alone are necessary, and to dwell on the more advanced knowledge which is not necessary for the children, e.g., a teacher might debate at length on gully traps, subsoil or water supply, but would not spend much time on such essentials as the value of open windows, and what NOT to put into ashpits.

The lectures I gave were not well attended, and the ostensible reason given for their non-attendance I have been given privately to understand was that “*I did not teach them anything they did not already know.*” Precisely my point. All the hygiene necessary to be taught can almost be compressed into twelve commandments, and the points can be illustrated and made interesting by a competent teacher.

It is to be hoped, now that the medical inspection of school children is an accomplished fact, that the matter will again be taken into hand seriously, because *the children of to-day* must be taught if one is to expect that great improvement in the habits and the cleanliness of the people and their homes, which all earnestly look for, and for which there is so much room.

The incidence of infectious disease among school children during the past year has been below the normal, when, however, 'enquiries into cases which arose pointed to school infection, the particular schools have been visited, the scholars examined, and such precautions as were deemed necessary have been taken.

During the past year the following schools have been closed for the reasons given below :—

Salisbury Road (Infants')	for Whooping Cough.
St. James' (Infants')	„ „

DIARRHŒA.

During 1907, 40 deaths were returned under headings which are officially classed as Diarrhœa.

The following table shows the number of deaths ascribed to Diarrhœa and the rates of such deaths per 1,000 births, and per 1,000 of population since 1897 :—

Year	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907
No. of deaths	153 ..	114 ...	146 ...	139 ...	113 ...	563 ..	85 ...	109 ...	87 ...	83 ...	41
Rate per 1,000 births.....	87·5 ...	64·3 ..	80·7 ...	76 0 ...	61·5 ...	27·1 ...	42·2...	56·7 ...	41·8...	38·2...	18
Rate per 1,000 population....	2·8 ..	2·0 ...	2·5 ...	2·4 ...	1·9 ...	0·8 ...	1·3...	1·7 ..	1·3...	1·2...	·5
							Five years 1897-1901		Five years 1902-6		
Average age Diarrhoea rate per 1,000 births							74		...		
,, per 1,000 population.....							2·3		...		
									41·2		
									1·2		

The above figures thus show a largely decreased mortality in the past 5 years, compared with the previous quinquennium, and are the lowest ever recorded in the Borough.

The deaths occurred in the different Wards as under :—

DERBY WARD.	STANLEY WARD.	MERSEY WARD.
Brookhill Road ... 1	Benedict Street ... 1	Derby Road ... 1
Cornwall Street ... 1	Orlando Street ... 1	Emley Street ... 1
Essex Street .. 1		Everton View ... 1
Laburnum Place .. 1		Johnstone Street... 1
Oak Street ... 1		Kirk Street ... 1
Waterworks Street 1		Langton Dock ... 1
Worcester Road ... 1		Lyons Street ... 1
		Molyneux Street ... 1
		Sandy Lane ... 1
KNOWSLEY WARD.	LINACRE WARD.	ORRELL WARD.
Aber Street ... 1	Addison Street ... 1	Glynne Street ... 1
Audley Street ... 3	Longfellow Street 1	Hawthorne Road.. 1
Bangor Street ... 1	Shelley Street ... 1	
Blair Street ... 1	St. Andrew's Road 1	
Boreland Street .. 3		
Chesnut Grove ... 1		
Denbigh Street .. 1		
Holywell Street ... 1		
Knowsley Road ... 1		
Nevada Street ... 1		
Oregon Street ... 1		
Rhyl Street ... 1		

Number of Deaths from Diarrhoea in :—

Derby Ward	...	...	...	...	7
Stanley Ward	...	...	...	...	2
Mersey Ward	...	...	...	...	9
Knowsley Ward	...	...	...	...	16
Linacre Ward	...	...	...	...	4
Orrell Ward	...	...	...	...	2
					<hr/>
					40
					<hr/>

FEEDING.

Enquiries as to the method of feeding the children gave the following results :—

6 cases were said to have been fed on breast milk only. In 5 of these cases the mothers admitted to having given bacon rinds and crusts to the children.

10 cases had been *recently* weaned, and at time of death were being hand fed.

18 cases were fed by hand *only*, never having been breast fed.

5 cases were fed on the breast and by hand.

Long tubed bottles were found in 9 instances.

Boat shaped ,, ,, 24 ,,

Deaths occurred in 40 houses :—

24 of which were occupied by 1 family.

11 of which were occupied by 2 families.

3 of which were occupied by 3 families.

2 of which were occupied by 4 families.

In the following cases 3 or more deaths have occurred previously in the same family :—

No. of Children.	No. Dead.	From Diarrhoea.	Parents Drink.	Age.	Feeding.
9 ...	6	...	5 ...	No ...	9 months Nestle's milk
3 ...	3	...	3 ...	No ..	4 months Cow's milk

An examination of the results of the enquiries made last year into the circumstances attending the deaths ascribed to Summer Diarrhœa does not materially add to, but merely confirms the facts previously noted in former years.

The first fact which is noticeable on an examination of the summary of such deaths is, that while attacks of Summer Diarrhœa occur in both children and adults, the deaths occur only in children, and mainly in children of very tender years.

Last summer out of 41 deaths, 38 occurred in children under the age of 18 months, 29 occurred in children under one year of age, and 10 of these under the age of six months.

When we take into consideration with the foregoing, the fact that in only one instance out of the 41 was the child entirely breast fed, the inference may fairly be drawn that a portion of the mortality was due to errors in feeding, either that the food given was of unsuitable character, or was in some way infected ; it may also fairly be inferred that the food at fault was very often milk, but not wholly so, since in addition to milk, many of the patent foods so extensively advertised, and even condensed skimmed milk, were used as foods for many of the children.

The following note also occurs in the Lady Inspector's report to me, " Raw plums, ice cream, &c., were frequently given to very young children."

Another point worth notice is that in ten instances the fatal attack of Diarrhœa dated from the weaning of the child—the inference to be drawn from that being that it is not without danger to wean a child during the Diarrhœa season.

Another fact which stands out this year, as it has done in other years, is the comparative scarcity and unimportance of the sanitary defects found in the houses where deaths occurred.

There was no overcrowding in any of the houses. The sanitary defects reported were—

Defective yard surfaces	...	...	3
Choked drains ...	...	...	2
Bad smell from ashpit	...	...	7
Defective water closet...	..	...	1

I attach some importance to No. 1. I am of opinion that all yards should have impervious surfaces. The belief is almost universal among scientists that the organism causing Summer Diarrhœa is one which flourishes in the soil, and if that be so, the organism would find a very favourable habitat in the polluted soils which are to be found in some of our badly paved, or partly paved, yard surfaces.

In spite of oft repeated warnings, it is very unsatisfactory to note that the detestable long-tubed feeding bottles are still freely used, and indeed one must cease to wonder at this when one hears of medical men actually advising mothers to use them in preference to the bottles without tubes. Feeding an infant by means of a tubeless bottle entails the necessity of holding the bottle while the baby has its meal, and it is the slight extra trouble thereby caused which in some instances is the reason why mothers do not use the tubeless bottles.

Unless the imparting of knowledge on the feeding of infants and young children should very soon form part of the curriculum in every girls' school, we may look forward for many years to come to a high fatality from Summer Diarrhœa.

My experience forces me to the conclusion that Summer Diarrhœa is an infectious disease. It is also extremely probable that flies play a great part in disseminating the infection, and parents of children suffering from Diarrhœa ought to be impressed with the necessity of scrupulous cleanliness in the management of the cases, the children's evacuations should be quickly disposed of, and diapers thoroughly washed. Instances have been brought to my notice where infected diapers have been thrown into ashpits, where they have become a resting place for millions of flies. The influence of flies on the spread of the disease emphasises the necessity for keeping covered the utensils used for storing milk, and for care in the storage of food stuffs generally.

It has also been shown that ashpits and middensteads containing horse manure are favourable breeding places for flies, and that under favourable conditions, from the time of the laying of the eggs a fly will develop from the egg in from 12 to 14 days. In order, therefore, to prevent the development of flies, it is very essential that during the summer months these receptacles should be emptied and cleansed at not greater intervals than 12 days. This more frequent emptying of ashpits will cost a little more money, but is that a question to be seriously weighed when the comfort, the health, and even the lives of people are in the opposite scale?

There is another factor in this mortality from Diarrhœa to which attention should be paid, and that is the nursing and treatment of the cases. In many instances the doctor is never called in until too late to be of any service. In some the doctor is only called so as to ensure a death certificate being given. This certificate is sometimes obtained too easily, and in my opinion a doctor should refuse a certificate of death in those cases to which he may have been called just before death, unless he is perfectly satisfied by observation and enquiry that everything possible has been done for the child. Many cases have been reported to me in which the doctors' instructions were never carried out, nor the medicine prescribed by them given. In other words some parents are culpably indifferent and careless as to the fate of their children, and I am convinced that certificates of death should be refused in certain instances, and the circumstances of the death inquired into by the Coroner.

Last summer a very interesting experiment was tried in Bootle, viz., the notification of Diarrhœa. During the months of July, August and September, the Health Committee offered to pay 2/6 for every case of Diarrhœa notified by medical men. The notifications were restricted to children under 2 years of age and to those cases only in which the doctor thought the services of the Lady Inspector would be useful and would be welcomed.

46 Notifications were received, excluding one for a child over age. 40 of these were received from 3 doctors, the remaining 6 from 4 others—the majority were notified from the Derby Road area.

10 Notified cases died. The following facts were noted in respect of 9 of these deaths :—

2 were found dead by the Lady Inspector on arrival.

2 were taken so late in the illness to the doctor that the notifications were of no practical use, the babies dying a few hours after his first visit. It will be noted that the notification of these 4 cases did not conform to the last mentioned condition, under which notification to the Medical Officer of Health was requested.

2 were children delicate from birth.

2 were children neglected when seriously ill by the parents drinking.

1 had cleft palate and hare lip and, therefore, had very little chance of surviving.

The remaining 36 recovered.

Of these 6 were cases of slight simple diarrhœa which there was perhaps no need to notify, since no help from the Sanitary Inspector was necessary.

30 additional deaths occurred from Epidemic Diarrhœa, in which no notification of the illness was received. Of these—

4 were illegitimate children put out to nurse.

4 were children delicate from birth.

2 were premature children.

2 were of twin birth.

1 had a cleft palate and hare lip.

On the whole I would describe the result of the experiment as highly satisfactory. Excluding those dead or moribund on the occasion of the first visit 89% of the cases visited recovered, while the circumstances were such in 5 out of the 6 remaining deaths as would almost preclude the possibility of recovery. It would appear that in all probability some lives were saved by the visitation. As last Summer, however, was not a favourable one for the spread of Diarrhœa, it would not be wise to attach too great importance to the results achieved, but I certainly think that the experiment is worth trying for another year. I would advise that the age limit be reduced to 1 year (instead of 2), and that the doctors be specially urged *to notify only those cases in which it is possible to benefit the child*. There can be no practical use in notifying cases which die before a visit can be made, or are dying when the first visit of the inspector is made, nor again in notifying very slight cases of simple diarrhœa among children in good homes.

Remedies may be classed in two divisions.

(1.) Measures having for their object an improvement in the production and distribution of infants' food, more especially milk.

(2.) Measures having for their object the education of the public on hygienic matters, more especially the feeding and care of infants.

With regard to No. 1 the most important and urgent reform is to make the adoption of the Dairies and Cowsheds Order compulsory in rural districts, and at the same time transfer the administration of the Order from the Rural District Councils to the County Councils.

This is the first step towards ensuring a clean milk supply from the country districts. In many rural districts the Dairies and Cowsheds Order has not been adopted, and in a great many of those which have adopted the Order, the provisions of that Order are not carried out.

The result is that a large quantity of the milk which is brought into towns from country districts is produced under very unsatisfactory conditions. Apart from the unsanitary conditions of the cowsheds, the cows are not groomed, their udders not cleansed, nor is provision made for washing the milkers' hands. In addition to these disadvantages the milk before reaching the consumer is changed from one vessel to another at least four times. So that, what with initial contamination, and opportunities for further contamination, the milk oft times is not fit for consumption when it reaches the consumer. It would be difficult to suggest measures for improving the production of milk in most town dairies, beyond in some instances the more thorough cleansing of the cows' udders, and the hands of the milkers before milking, and the *compulsory cooling of milk*.

It would also be advantageous if the legislature placed restrictions on the sale of patent foods (so many of which are worthless), and on tins containing condensed skimmed milk I would suggest that there be printed in prominent letters "Not to be used for the food of children."

With regard to No. 2 I can only recommend the continuation of the measures adopted last year, viz., the distribution of leaflets giving instructions in infant feeding and the domiciliary visits by the female inspectors to supplement the instructions given thereon. As I have stated on previous occasions, it is not of much use the inspector paying one visit, giving certain instructions, and then for the mother, perhaps, never to be visited again—the advice given is soon forgotten, and things go on in the same old way. What is wanted is that the mothers should be *constantly* visited, but this cannot be done with a staff of two lady inspectors. Now, however, an Association of Voluntary Health Workers having been formed in Bootle, the members will be able to do much to supplement the efforts of the paid inspectors, and I am confident that the work of these lady enthusiasts will prove of great benefit to the community, and ultimately will be a source of extreme gratification to themselves for having assisted in a good cause.

PHTHISIS.

A very large proportion of the deaths registered from Phthisis occurs in the Workhouse Hospitals of the West Derby Union ; many of these are sailors and dock labourers, who, in all probability, lived in Bootle but a very short time. These deaths materially increase the death rate from Phthisis.

During 1907, 82 deaths were registered from this disease, equal to a death rate of 1·1 per 1,000, ·1 less than 1906.

The deaths were divided among the Wards as follows :—

Derby.		Stanley.		Mersey.		Knowsley.		Linaere.		Orrell.
14	...	11	...	13	...	11	...	30	...	3

The following table shows the yearly number of deaths from Phthisis since 1895, and the rate per 1,000 of population.

	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907
No. of Deaths....	84...	70...	86...	75...	92...	75...	78...	92...	76...	100...	78...	86...	82
Death Rate per													
1,000.....	1·5...	1·3	1·5...	1·3...	1·6...	1·3...	1·3...	1·6...	1·2...	1·6...	1·2...	1·2...	1·1

Table showing progressive decline in the death rate from Phthisis for the last three decades for the whole of England.

	1866 to 1875.		1876 to 1885.		1886 to 1895.		1896 to 1900.	
Annual average death-rate per 1,000 of the population above six years of age from Phthisis..	3·62	...	2·78	...	2·44	...	2·03	

Since July, 1901, a fee of 2s. 6d. has been paid to medical practitioners for all cases of Phthisis notified by them.

From July to December, 1901, 22 cases were notified. In 1902, 22 cases only were notified for the whole 12 months. In 1903, 21 cases. In 1904, 40 cases. In 1905, 22 cases. In 1906, 18 cases. In 1907, 7 cases.

From these figures it is apparent that the system of the voluntary notification of Phthisis in Bootle is a dead letter.

I have before stated that in my opinion the prevention of this disease, as regards case to case infection, is the concern of the family doctor as much as that of the Sanitary Authority. I think, however, there are many cases of

this disease occurring among the poorer classes which would be benefited by the supervision of the Sanitary Officials in the direction of ensuring cleanliness of the house, the opening of windows, and the forbidding of promiscuous expectoration. Unless these cases are notified by the doctor their existence remains unknown, and they are under no supervision whatever, because in many instances the doctors are not constantly in attendance. Those cases which were notified were regularly supervised by the Assistant Medical Officer of Health until either death, removal from the district, or recovery took place.

I do not quite appreciate the necessity of reporting cases after death because the information of the death would come to me from the Registrar in the ordinary course of events. In fact in some instances I have obtained the information from the Registrar *before* the receipt of the notification.

I am of opinion that the risk of infection from case to case is apt to be over estimated, but whatever the amount of the risk may be I have no doubt that such risk would be greatly lessened if due attention were paid to the cleanliness of houses and to the efficient ventilation of houses and rooms by open doors and windows.

The Sanatorium treatment of Phthisis mainly consists in paying attention to light and cleanliness, and to providing abundance of fresh air—and if useful for curing the disease how much more useful must be the application of these principles to the prevention thereof.

Notices warning people against the filthy habit of promiscuous expectoration have now been hung in all the bakehouses, and most of the work-shops in the town.

The bacteriological examination of sputum is undertaken at the Linacre Hospital free of charge. This opportunity for bacteriological examination is rarely made use of.

The details of the disinfection carried out in connection with Phthisis are as follows :—

Number of cases notified and taken from Death Returns...	91
Number of houses disinfected 	75
Number of houses disinfected and cleansed...	37

The cleansing, which is done at the expense of the Corporation, consists of stripping the walls and whitening the ceilings of the rooms occupied by the patient.

Disinfection consists in thoroughly spraying the walls, ceilings, floors, &c., with a strong solution of formalin by means of an equifex spray.

ALCOHOLISM.

Six deaths are put down as due to this cause compared with 7 last year and 11 in 1904.

The number of deaths ascribed to Alcoholism does not in any way represent the harm done to the public health by excessive drinking.

THE MIDWIVES ACT.

This Act came into operation on the 1st of April, 1905. The object of the Act is to secure the better training of midwives and to regulate their practice. The Central Authority is the Midwives Board, and by Sec. 8 of the Act, the Councils of County Boroughs are constituted the Local Supervising Authorities. The powers and duties of the local supervising authority for Bootle have been delegated to the Health Committee with the Medical Officer of Health as the executive officer. The duties are laid down as follows:—

- (1). To exercise general supervision over all midwives practising within their area in accordance with the rules to be laid down under this Act.
- (2). To investigate charges of malpractice, negligence, or misconduct, on the part of any midwife practising within their area, and should a *prima facie* case be established, to report the same to the Central Midwives Board.
- (3). To suspend any wife from practice, in accordance with the rules under this Act, if such suspension appears necessary in order to prevent the spread of infection.
- (4). To report at once to the Board the name of any midwife practising in their area convicted of an offence.

- (5). During the month of January of each year to supply the Secretary of the Board with the names and addresses of all midwives who, during the preceding year, have notified their intention to practice within their area, and to keep a current copy of the roll of midwives, accessible at all reasonable times for public inspection.
- (6). To report at once to the Board the death of any midwife, or any change in the name or address of any midwife in their area, so that the necessary alteration may be made in the roll.
- (7). To give due notice of the effect of the Act so far as practicable, to persons at present using the title of midwife.

The Board have framed rules by which the midwives have to regulate their work. There are provisions in the rules for ensuring the personal cleanliness of midwives, and also the cleanliness of their homes and clothing. They must carry with them to their cases certain specified articles, and the bags containing them must be open to inspection at any time.

They must keep records of all the cases they attend. They must notify the Local S.A. of still births, deaths, puerperal fever cases and cases of infectious disease occurring in their practice, and also of those cases in which they seek medical aid.

In order to carry out the duties imposed upon them, the Local Supervising Authority appointed as Female Sanitary Inspector, a qualified midwife to assist the M.O.H. in the administration of the Act.

As some of the midwives enrolled are absolutely illiterate and without any training, in addition to supervisory work, the Inspector spends a good deal of time in giving them much needed instruction. I have myself also visited at the homes of all the midwives, and inspected their books, bags, and appliances, and have also explained to them the rules framed by the Board and their duties as set out therein.

Strict enquiries have been made into all cases of still births notified by the midwives, and in addition into the cases of children who according to the death returns have died in the first month of their lives, particularly those who have died within a few days of their birth, with the idea of discovering any possible carelessness on the part of the midwife which has not been brought to the notice of the Local Supervising Authority.

There are 20 women on the local roll of midwives, 17 of these have had at some time or other some systematic training, and some of them require their knowledge bringing up to date. The remaining 3 were placed on the roll by reason of the fact that each produced a certificate to the effect that she had been in *bona fide* practice as a midwife for at least one year prior to July 31, 1902, and that she was sober, trustworthy, and of good moral character. Of these, 2 cannot read or write. In addition 4 midwives resident outside the Borough notified me of their intention to practice within the Borough, when they were called upon. I know nothing of these 4 except that their names appear on the Midwives Roll.

The following is the summary of the work done under the Act, 1907 :—

Routine visits paid to midwives' houses, inspection of bags, case books, &c.	74
Enquiries <i>re</i> still born children	45
Other enquiries	57
<hr/>	
Total visits paid under the Midwives Act	186

Under the Rules of the Central Midwives Board (Sec. E. 18), the following notifications have been received :—

Records of sending for medical help	62
Still births	31
Deaths of children before attendance of a medical practitioner	1
Cases of puerperal fever notified by midwives	0
Cases of other infectious diseases notified by midwives	0

Under Sec. 8, I have to keep the Central Midwives' Board acquainted with the death, change of name or address of any midwife. The under-mentioned changes have been notified :—

Change of name	0
Change of address	5
Death of midwives	0
Notice of intention to cease practice	0

On the whole the work done by the midwives is very satisfactory. That of the 3 women who are on the roll, but who have not had any systematic training is the least satisfactory. Among them occurred several irregularities in respect of keeping books, the unsatisfactory condition of their bags, and the carrying of proper instruments, have come to my notice, the accumulation of which irregularities might possibly result, if the cases had been brought forward, in having the offending midwives removed from the roll, but I have not done this for the simple reason that they would still be allowed to practice provided they did not use the title "midwife," the only result of having them off the roll would be that they would be compelled to remove the sign plates from their houses. I, therefore think it better to have them on the roll and under supervision, than off the roll and outside supervision.

DRAIN TESTING.

During the year the drains of all new houses have withstood the water test before receiving a certificate of suitability for habitation.

New houses	...	...	...	198
Alterations to all domestic buildings	...			27
				<hr/>
Total	...			225
				<hr/>

The use of this test has thus effected a great improvement in the laying of drains.

OFFENSIVE TRADES.

These have been regularly supervised throughout the year. These trades number four and are as follows :—

	No. of inspections made.		
2 Tanneries	15
1 Soap Boiler	12
1 Gut Scraper	10

SUBLET HOUSES.

The byelaws with respect to these have been in force a little more than three years. There are 150 houses on the register, and to these 1,620 visits have been made, both by day and night. 330 notices have been served upon

the occupiers for infringements of these bye-laws in respect of overcrowding, dirty rooms, &c., and it has not been found necessary to prosecute in any one instance. There were seven prosecutions in 1905.

The previous prosecutions have evidently had a very salutary effect, and on receipt of notices the causes of complaint are now promptly remedied.

SLAUGHTER HOUSES.

There are but two slaughter houses in constant use in the Borough. These are kept in a satisfactory condition. Another is occasionally used. Practically all the meat sold in Bootle comes either from the public abattoirs in Liverpool or Birkenhead, or is imported frozen from abroad.

FOOD INSPECTION.

629 Visits have been made to Meat, Fish, Fruit and Ice Cream shops during the year. These visits were made chiefly during the summer. Surprise visits have also been made on Sunday mornings to shops in certain parts of the Borough where unsound food might be sold, but with trifling exceptions no article of food in an unsound condition has been discovered.

In addition 40 carts selling articles of food in the street were examined.

5 Samples of food stuffs, viz.:—2 milk, 3 meat pies, made up by local pork butchers, &c., and other tinned goods imported into the Borough, were sent during the year to Professor Boyce for bacteriological examination. All of these samples were found to be sterile.

FACTORY AND WORKSHOP ACT, 1901.

Under this Act the Medical Officer of Health is required to report specifically on the administration of the Act, and to send a copy of such report to the Secretary of State. The chief points to be reported on are as follows:—

1. Sanitary condition of workshops and workplaces, including—
 - (1) Ventilation.
 - (2) Cleanliness of floors and walls.
 - (3) Lighting.
 - (4) Water-closet provision.
 - (5) Overcrowding.
 - (6) Drainage of floors where wet processes are carried on.

2. Special Sanitary Regulations for Bakehouses.
3. Home work.
4. The keeping of a list of outworkers.
5. The keeping of a register of workshops.

All these points are dealt with in the summary which follows.

The workshops and workplaces include Bakehouses, Confectioners' Bakehouses, Dressmakers, Tailors and Milliners' workrooms, Laundries, Boot-makers. A list of outworkers employed by different firms engaged in the manufacture of wearing apparel is also kept, and the houses of the outworkers are regularly inspected.

This work is performed by one male inspector, while the lady inspector visits the shops where women are employed.

A sharp look out is also kept that no work connected with clothing is done in any house infected with any infectious disease.

The following table shows the summary of work done under the Factory and Workshop Act. It is set forth more in detail on pages 56 – 58.

Factories, Workshops, Laundries, Workplaces and Homework.

1.—INSPECTION.

Including Inspections made by Sanitary Inspectors or Inspectors of Nuisances.

Premises.	Number of		
	Inspections.	Written Notices.	Prosecutions.
Factories (Including Factory Laundries) ...	67	21	—
Workshops (Including Workshop Laundries) ...	671	31	—
Workplaces (other than Outworkers' Premises included in Part 3 of this Report)	—	—	—
Total	738	52	—

2.—DEFECTS FOUND.

Particulars	Number of Defects			Number of Prosecutions	
	Found	Remedied	Referred to H.M. Inspector		
Nuisance under the Public Health Acts :—					
Want of Cleanliness	9	9	—	—	
Want of Ventilation	2	2	—	—	
Overcrowding	2	2	—	—	
Want of drainage of floors	2	2	—	—	
Other Nuisances	46	46	—	—	
Sanitary accommodations {	insufficient	1	1	3	—
	unsuitable or defective ..	1	1	—	—
	not separate for sexes ..	1	1	—	—
Offences under the Factory and Workshop Act :—					
Illegal occupation of underground bake-house (S. 101)	—	—	—	—	
Breach of special sanitary requirements for bakehouses (SS. 97 to 100)	1	—	—	—	
Other Offences	3	3	—	—	
(Excluding offences relating to outwork which are included in Part 3 of this Report.)					
Total	68	67	3	—	

NATURE OF WORK.	OUTWORKERS' LISTS. SECTION 107.										OUTWORK IN UNWHOLESOME PREMISES. SECTION 108.					OUTWORK IN INFECTED PREMISES. SECTIONS 109, 110.		
	Lists received from Employers.				Numbers of Addresses of Outworkers received from other Councils.	Numbers of Addresses of Outworkers forwarded to other Councils.	Prosecutions.		Number of Inspections of Outworkers' premises.	Instances.	Notices served.	Prosecutions.	Instances.	Orders made (S. 110).	Prosecutions (Sections 109, 110).			
	Twice in the year.		Once in the year.				Failing to keep or permit inspection of lists.	Failing to send lists.										
	Lists.	Outworkers.	Lists.	Outworkers.														
	Wearing Apparel— (1) making, &c. (2) cleaning and washing... Lace, lace curtains and nets Furniture and Upholstery... Fur pulling Umbrellas Paper Bags and Boxes ... Brush Making Stuffed Toys File Making Electro Plate... Cables and Chains Anchors and Gravel's ... Cart Gear Locks, Latches and Keys ... Total 	11	52	4	9	43	31	—	—	148	1	1	—	—	—	—		

4.—REGISTERED WORKSHOPS.

Workshops on the Register (s. 131) at the end of the year.							Number
Bakehouses	...	...	...	...	...	...	35
Confectionery Bakehouses	...	...	..	...	...	...	28
Workshops	...	...	...	...	...	...	82
Work Places	...	...	..	...	...	...	61
Outworkers Premises	...	...	...	...	...	...	21
Total number of workshops on Register							227

5.—OTHER MATTERS.

Class.	Number
Matters notified to H.M. Inspectors of Factories :—	
Failure to affix Abstract of the Factory and Workshop Act (S. 133)	10
Action taken in matters referred by { Notified by H.M. Inspector H.M. Inspectors as remediable { under the Public Health Acts, but { Reports (of action taken) not under the Factory Act (S. 5) { sent to H.M. Inspectors	8 nil
Other	2
Underground Bakehouses (S. 101)—	
Certificates granted during the year (Renewed)	18
In use at the end of 1907	18

The rooms where dressmaking, millinery and tailoring are done, are sanitary, and are generally kept in a cleanly state. The same applies to rooms occupied by outworkers. The number of cellars in Bootle used as workshops is very few.

SHOP HOURS ACT.

The main object of this Act is to prevent the employment of young persons for such an excessive number of hours as will be prejudicial to their health. A young person under the Act means a person under the age of 18 years.

The longest period during which a young person may be employed in any one week is 74 hours, including meal times.

Notices referring to the provisions of the Act must be exhibited in a conspicuous place in shops.

The following table gives the work done under this Act:—

No. of shops visited by day ...	...	...	...	384
No. of shops visited by night...	...	...	...	25
No. of instances in which the provisions of the Act were found not to be complied with ...	...	...	...	25

In all instances the cause for complaint was remedied after notice.

One of the defects in this Act is that the maximum number of hours allowed for work is fixed as an aggregate number for a week. There ought, in addition, to be a daily maximum.

SEATS FOR SHOP ASSISTANTS ACT.

Under the above Act, the title of which reveals its object, the following work has been done:—Shops visited, 186. No seats provided in 14 instances.

It was found necessary to issue only two notices in respect of the above, in the other instances the seats were provided after verbal notice from the inspector.

BAKEHOUSES.

On pages 57 & 58 will be found the summary of the work done in connection with the above. These places are regularly inspected and are, on the whole, kept in a cleanly condition, a great improvement having been manifest in this respect since the alterations to the Bakehouses, enjoined by the Factory Act, 1901, have been carried out. In some instances better provision for the washing of the bakers' hands might be provided.

During the year 7 notices were served for the cleansing of dirty walls and ceilings, but it was not found necessary to serve any in respect of the cleansing of the utensils used in baking.

Many of the bakehouses, while not unclean are untidy, and this defect is in part due to the lack of system and untidy habits of the bakers themselves, and in part to the fact that no proper provision has been made for the storage of the utensils used, and no place provided for the garments and boots of the men employed. These matters require stricter attention in the future.

DAIRIES, COWSHEDS AND MILKSHOPS.

These have been regularly inspected throughout the year and the cows housed in the shippens have been in addition examined by the Veterinary Surgeon every quarter. He reports that the cows in the shippens attain a very high standard of quality, and that in every way the condition of the animals is satisfactory.

A large number of dairymen have coolers, and in the summer time cool their milk. I am of opinion that at that period of the year it would be advantageous if the practice of cooling milk were universally adopted. In some instances better provision might be made for the washing of the milkers' hands and the cleansing of the cows' udders before milking. These are points which cannot be enforced, and one must depend on the good will of the cowkeepers for the adoption of these measures.

During the year no cow has been removed from the shippens of the Borough by reason of Tuberculosis of the udder; 8 however were sent out on the advice of the Veterinary Surgeon as suspicious animals, without the Tuberculin test being applied. In consequence of mastitis, 25 samples of milk were tested for acid fast bacilli, but were found free therefrom.

SALE OF FOOD AND DRUGS ACTS, YEAR 1907.

	Total Number of Samples Analysed.	Number Reported by Analyst as Adulter- ated.	Prosecu- tions.	Result.	Remarks.
Milk	91	24	16	15 convictions, 1 dismissed.	In the remaining 8 cases the adulteration was so trifling as not to warrant prosecution, or the vendor was warned. Amount of fines and costs, £36 4s. 0d. Analyst's fee allowed in each conviction.
Butter	57	4	2	2 convictions.	Fined £5 and £1 costs, and 5s. and 7s. costs for selling Margarine without a proper label. The other 2 adulterations were non-official samples.
Lard	3	—	—	—	—
Skimmed Milk	1	—	—	—	—
Beer	5	—	—	—	—
Rum	4	—	—	—	—
Scotch Whisky... ..	3	—	—	—	—
Brandy	1	—	—	—	—
Port Wine	2	—	—	—	—
Soda Water	1	—	—	—	—
Jam	4	—	—	—	—
Sweets	5	—	—	—	—
Olive Oil... ..	1	—	—	—	—
Crushed Linseed	1	—	—	—	—
Oil of Turpentine	1	—	—	—	—
Cod Liver Oil	1	—	—	—	—
Blue Pills	1	—	—	—	—
Glasgall	1	—	—	—	—
Lunch Tongue	1	—	—	—	—
Bergise	1	—	—	—	—
Sausage	2	—	—	—	—
Cheese	6	—	—	—	—
Meat Pies	3	—	—	—	—
Tartarie Acid	1	—	—	—	—
Calf's Feet Jelly	1	—	—	—	—
Tapioea	1	—	—	—	—
Cream of Tartar	1	—	—	—	—
Corn Flour	1	—	—	—	—
Flowers of Sulphur	1	—	—	—	—
Total	202	28	18	—	—

NOTE.—In addition to the above, other samples were taken, but were not sent to the Public Analyst:—

Two samples of milk and three samples of meat pies were also taken for the purpose of Bacteriological Examination by Professor Boyce at the Liverpool University.

The foregoing table shows that the largest number of samples purchased in Bootle were those of milk. This is in accordance with the recommendation of the Board of Agriculture, viz.: that the total number of samples taken should total not less than 3 per 1,000 of the population, and half of these should be milk.

Report of Cases Treated in the Infectious Hospital, Linacre.

Resident Medical Officer—Dr. JOSEPH BEARD. M.R.C.S. (ENG.),
L.R.C.P. (LOND.),

Table shewing cases treated in hospital.

Diseases.	No. of Cases.	No. of Deaths.	Percentage Mortality.
Scarlet Fever.....	238	8	3·3
Enteric Fever.....	28	7	25
Diphtheria.....	34	6	17·6
Smallpox	—	—	—
Other Diseases.....	32	7	21·8

Bootle.
275 Cases

...

Litherland.
57 Cases.

SCARLET FEVER.

Age.	Bootle.		Litherland.		Total.	Deaths.
	Males.	Females.	Males.	Females.		
0-1	—	1	1	—	2	1
1-2	3	3	—	—	6	—
2-3	10	13	1	—	24	2
3-4	10	8	5	2	25	1
4-5	7	17	4	3	31	3
5-10	46	50	8	10	114	1
10-15	3	14	2	3	22	—
15-20	1	3	2	—	6	—
20-25	2	2	—	1	5	—
25-35	—	1	1	—	2	—
35-45	—	1	—	—	1	—
	82	113	24	19	238	8

The deaths were distributed as follows :—

Bootle.			Litherland.
6	...	...	2

DIPHtheria.

Age.	Bootle.		Litherland.		Total.	Deaths.
	Males.	Females.	Males.	Females.		
0-1	1	—	—	—	1	1
1-2	—	—	—	—	—	—
2-3	1	2	—	—	3	1
3-4	6	3	1	2	12	2
4-5	1	4	—	—	5	1
5-10	2	6	3	1	12	3
10-15	—	—	—	—	—	—
15-20	—	—	—	—	—	—
20-25	—	—	—	—	—	—
25-35	1	—	—	—	1	—
	12	15	4	3	34	8

DEATHS.

Bootle		Litherland
7	...	1

Tracheotomies 8, with 4 deaths.

ENTERIC FEVER.

Age.	Bootle.		Litherland.		Formby.		Total.	Deaths.
	Males.	Females.	Males.	Females.	Males.	Females.		
0-5	1	—	—	—	—	—	1	1
5-10	3	1	—	—	—	—	4	1
10-15	2	4	—	—	—	—	6	1
15-25	4	4	—	—	—	1	9	1
25-35	1	1	1	—	1	—	4	2
35-45	2	—	—	—	—	—	1	—
over 45	2	1	—	—	—	—	3	1
	15	11	1	—	1	1	29	7

The deaths were as follows :—

Bootle	Formby
6	1

31 cases were sent into hospital with the disease from which they were incorrectly diagnosed. Of these 8 died and 23 recovered.

13 were sent in as Typhoid and found not to be so suffering.

9	„	Scarlet	„	„	„
9	„	Diphtheria	„	„	„

TABLE No. 1.—TABLE SHEWING QUARTERLY ANALYSES OF WATER SUPPLIED BY THE LIVERPOOL WATER COMMITTEE
TO BOOTLE DURING THE YEAR, 1907.

Description.	DATES OF Analysis Report	Samples Drawn	Total Solid Matter in Solution	Ammo- nia.	Ammonia from Organic Matter by distillation with Alkaline Permanganate.	Nitro- gen as Nitrates	Com- bined Chlorine	Oxygen required		Total Hard- ness.
								in 15 mins	In 3 hrs.	
Vyrnwy ...	Mar. 11	Mar. 4	5.80	.000	.006	.000	.90	.080	.160	2.47°
Rivington ...	"	"	10.00	.001	.009	.021	1.40	.047	.094	4.16°
Green Lane Well	"	"	534.00	.000	.000	.568	3.40	.000	.000	20.00°
Vyrnwy ...	June 7	June 3	4.56	.000	.006	.000	.90	.070	.136	1.82°
Rivington ...	"	"	10.60	.002	.007	.021	1.60	.022	.044	3.90°
Green Lane Well	"	"	—	—	—	—	—	—	—	—
Vyrnwy ...	Sept. 7	Sept. 2	5.76	.002	.005	.000	0.85	.137	.227	2.21°
Rivington ...	"	"	9.40	.002	.006	.021	1.50	.023	.046	3.90°
Green Lane Well	"	"	334.40	.000	.000	.459	3.50	.000	.000	21.72°
Vyrnwy ...	Dec. 6	Dec. 2	6.20	.001	.007	Trace	.85	.111	.204	2.60°
Rivington ...	"	"	9.36	.002	.008	.021	1.40	.038	.076	3.90°
Green Lane Well	"	"	334.00	.000	.001	.568	3.40	.000	.002	21.72°

Sanitary Administration.

SUMMARY OF THE WORK DONE BY THE LADY SANITARY INSPECTORS.

No. of Houses visited (including visits to houses where deaths had occurred from Epidemic Diarrhœa)	7359
„ Houses found dirty	748
„ Families visited... ..	11012
„ Houses re-visited	3688
„ Notices sent for dirty floors and bedding	10
„ Notices sent for overcrowding	—
„ Notices complied with	10
„ References to Sanitary Inspectors	156
„ Enquiry visits	75
„ Visits to cases of minor infectious disease notified by the Elementary Education Authorities	1047
„ Sublet Houses visited	1357
„ Sublet houses found dirty	385
„ Sublet Houses overcrowded	11
„ Other infringements	374
„ Notices sent for defective sash cords	135
„ Notices complied with	135
„ Routine visits to Midwives	74
„ Enquiries <i>re</i> still-births	45
„ Other enquiries... ..	57
„ Visits under Midwives Act	176

NUISANCES.

No. of Complaints made by inhabitants	...	...	...	533
„ Nuisances discovered on above	...	...	...	663
„ Nuisances discovered on house to house inspection	...	...	...	8823
„ Notices issued to owners	...	...	...	4440
„ Notices issued to occupiers	...	...	...	130
„ Notes to Complainants...	...	...	...	145
„ Notes sent to comply with notices	...	...	...	130
„ Nuisances re-inspected...	...	...	...	12329
„ Water closet conversions	...	...	..	17
„ Ashpits substituted by bins (does not include number fixed at new property)	...	...	...	41
„ Informations laid	...	...	...	10
„ Of convictions	...	...	...	8
„ Magistrates' Orders obtained	...	...	...	7
Amount of Fines and Costs	...	...	..	£3 2s. 0d.

COMMUNICATIONS SENT OUT FROM OFFICE.

References to the Borough Engineer...	...	...	...	290
„ „ Water Engineer, Liverpool	...	...	...	37
„ „ Education Authorities	...	...	...	241
„ „ Public Library	...	...	...	376
„ „ House Surgeon, Bootle Hospital...	...	...	...	376
„ „ Sunday Schools	...	...	...	186
„ „ Day Schools	...	...	...	556
Communications <i>re</i> Nuisances	...	...	...	275
„ „ <i>re</i> Contracts	...	...	...	6

CANAL BOATS ACT.

Boats inspected in 1906	177
-------------------------	-----	-----	-----	-----	-----

Infringements :—

Registration	...	...	...	...	—
Notification of change of Master	...	...	...	...	—
Certificates	...	...	...	...	—
Marking	...	...	...	...	—
Overcrowding	...	...	..	...	—
Separation of the Sexes	...	...	...	...	—
Cleanliness	...	...	...	...	—
Ventilation	...	...	...	...	—
Painting	...	...	...	...	12
Provision of Water Cask	...	...	...	...	—
Removal of Bilge Water	...	..	...	...	—
Notification of Infectious Disease	...	..	...	...	—
Admittance of Inspector	...	...	...	...	—
Notices sent in respect of same	...	...	...	...	12
Legal proceedings were not taken in any case.					
Cases of Infections dealt with and measures of isolation adopted					
...	...	...	...	...	None
Detention of boats for cleansing and disinfection	...	...	...	...	None

CATTLE SHIPS.

No. Inspected	...	...	...	...	...	...	639
„ Infringements reported	...	...	...	...	...	...	—
„ Ships re-inspected	...	...	...	...	...	...	1218
„ Found clean on re-inspection	...	...	...	...	...	...	609

COMMON LODGING HOUSES.

No. registered under the Public Health Act	...	...	...	...	8
„ of day and night inspections	...	...	...	...	389
Infringements of Byelaws—					
Failure to cleanse walls and ceilings, &c.	...	...	...	...	1
No. of informations laid in respect of infringements	...	...	...	...	—
„ Convictions	...	...	...	...	—

SUBLET HOUSES.

No. of Houses on Sublet Register	...	..	...	...	150
„ Day and night inspections	...	...	...	...	1620
„ Infringement of Sublet Byelaws	..	...	...	...	330
„ Information laid in respect of infringements	...				—

STEPS TAKEN TO PREVENT SMOKE NUISANCE.

No. of Observations made	...	...	...	...	39
„ Notices served in respect of excessive black smoke	...				17
„ Informations laid in default of compliance with notices	...	...	...	...	4
„ Informations laid in default of compliance with Order	...	...	...	...	—
Amount of Fines and Costs	...	...	...	...	£1 7s. 6d.

DAIRIES, COWSHEDS AND MILKSHOPS.

No. of Milkshops on Register	...	...	...	...	33
„ Shippons with dairies attached	...	...	...	...	37
„ Inspections made	...	..	...	...	169
„ Notices served for defects	...	...	...	...	—
„ Notices complied with	...	...	...	...	—
„ Notices served <i>re</i> utensils and covering of milk vessels	...				—
„ Notices served requiring the removal of manure	...				—

The occupiers of shippons and milkshops have from time to time been verbally cautioned with regard to the cleanliness of the premises, the cows, and proper storage of milk.

FACTORY AND WORKSHOPS ACT.

WORKSHOPS AND WORKPLACES (EXCLUDING BAKEHOUSES).

No. on Register	...	..	...	...	...	143
„ of Visits made	...	...	...	...	...	671
„ re-visits	...	...	...	...	...	34
Workshops found defective	..	...	...	...	...	31

No. of Workrooms with dirty walls	14
„ „ „ ceilings	14
„ „ „ floors	3
„ „ „ lavatories	0
„ Workrooms not properly ventilated	2
„ Workrooms found overcrowded	2
„ Defective drains and water-closets	3
„ Miscellaneous defects found	9
„ Notices issued on occupiers	14
„ Notices issued on owners	10
„ Notices complied with	24
„ References to the Factory Inspector	10

SHOP HOURS ACT.

No. of Shops visited by day	209
„ Shops visited by night	175
„ Instances in which the provisions of the Act were found not to be complied with	25

BAKEHOUSES.

No. on Register	35
No. of Visits made	205
„ Re-visits	26
„ Bakehouses found dirty (walls and ceilings)	12
„ Notices issued for limewashing	8
„ Bakehouses limewashed without notice	27
„ Notices issued for defective drainage	5
„ Notices for defective walls and floors	0
„ Notices to repair defective ceilings	0
„ Notices to cleanse tables, utensils, etc.	9
„ Notices to clean areas	0
„ References to the Factory Inspector	4

CONFECTIONERY BAKEHOUSES.

No. on Register	28
No. of Visits made	150
„ Re-visits	6

No. found dirty (walls and ceilings) ...	...	...	...	5
No. of Notices issued for limewashing	...	...	...	5
„ Notices issued for defective drainage ..	...	...	...	0
„ Notices issued to cleanse floors, utensils, etc.	...	...	...	1
„ Notices issued to remove drains	...	...	...	0

OUTWORKERS.

No. of Outworkers on Register	...	...	...	...	21
„ Visits made to houses of outworkers	...	...	...	...	148
„ Re-visits ..	...	...	...	...	5
„ Notices served for sanitary defects at houses of outworkers	...	...	...	...	9
„ Unwholesome premises...	...	...	...	...	1
„ Dirty walls and ceilings	...	...	...	...	2

[All the above notices were complied with.]

Outworkers employed in Bootle	{	Tailors or Tailoresses	4
for Liverpool firms	{	Dressmakers	14
Outworkers employed in Liverpool	{	Tailors or Tailoresses	13
for Bootle firms	{		

FOOD INSPECTION.

No. of Foodshops visited	...	...	...	...	629
Amount of food seized in small quantities and destroyed					
during the year	...	...	...	...	2,645 lbs.

SUMMARY OF LEGAL PROCEEDINGS.

Breaches of Common Lodging House Regulations ..	...	...	...	—
Breaches of Sublet House Regulations	...	...	...	—
Smoke nuisances ..	...	...	...	5
Defective drains, etc.	...	...	...	5
Filthy floors, woodwork, etc. ..	...	...	...	—
Infringements of Sale of Food and Drugs Acts	...	...	...	18
„ Midwives Act	...	...	...	—
„ Factory and Workshop Act	..	...	...	—
Establishing offensive trade without permission	...	...	...	—
Order obtained for removal of body to Mortuary	...	...	...	—
Exposure of person whilst suffering from Infectious Disease				1

DISINFECTION.

No. of Houses disinfected after fevers	...	...	...	408
„ Houses disinfected after Phthisis	...	...	...	78
„ Houses disinfected after Measles	...	...	...	4
„ „ „ „ Anthrax	...	...	...	2
„ Schools disinfected after Measles	...	...	...	1
„ Visits made to infected houses	...	...	...	487
„ Re-visits made to infected houses	...	...	...	884
„ Houses cleaned in default of owners	...	...	...	5
„ Houses disinfected from other causes than fevers	...	...	...	6

NOTE.—Since June, 1903, all houses with a rental of eight shillings per week or under, have been cleansed after infectious disease (*i.e.*, the walls stripped, and the ceilings whitened), by the Corporation free of cost.

FILTHY HOUSES.

No. of Notices sent to cleanse the walls and ceilings of filthy houses	...	...	...	...	...	...	...	521
No. of Notices complied with ..	...	...	...	...	...	...	...	521

LIST OF ARTICLES DISINFECTED.

Matrasses	...	...	...	...	...	...	494
Beds	...	...	...	...	...	...	464
Pillows	...	...	...	...	...	...	1509
Blankets	...	...	...	...	...	...	1048
Quilts	..	...	...	...	...	...	657
Sheets	...	...	...	...	...	...	972
Carpets	...	...	...	...	...	...	366
Wearing Apparel	...	...	..	...	..	...	4354
Miscellaneous Articles	...	...	...	...	...	...	2045

11,909

NOTE.—These figures do not include the ambulance bedding (one bed, one pillow and three blankets), which is disinfected after the removal of each case.

The following articles were destroyed by request of the owners, after infectious disease :—

Matrasses	...	...	...	...	...	...	12
Pillows	..	...	...	...	...	...	0
Quilts	...	..	...	...	...	...	0
Miscellaneous	...	...	...	...	...	...	0
Beds ...	...	...	...	...	...	...	1
Blankets	...	...	...	...	...	...	1
Wearing Apparel	...	...	...	...	...	...	1

FLUSHING.

The flushing gang consists of two Corporation workmen, and one Liverpool waterman.

No. of Private houses at which drains were flushed	...	18990
„ Passage sewers flushed	... ..	1264
„ Public buildings at which drains were flushed	...	40

A day a week has been devoted to the flushing of premises in which cases of fever had occurred.

The drains at the Bootle Borough Hospital were flushed 18 times during the year.

The amount of fresh water used during the year was 4,913,500 gallons, with the addition of 386,000 gallons of salt water supplied from the Corporation salt water hydrants, used one half-day in each week.

During the summer months a second flushing gang was employed whose special work was the flushing of back passages.

VITAL STATISTICS OF WHOLE DISTRICT DURING 1907 AND PREVIOUS YEARS.

YEAR.	Population estimated to Middle of each Year.	BIRTHS.		TOTAL DEATHS REGISTERED IN THE DISTRICT.				DEATHS IN PUBLIC INSTITU- TIONS IN THE DISTRICT.	Deaths of Non- residents registered in Public Institutions in District.	Deaths of Residents registered in Public Institutions beyond District.	NET DEATHS AT ALL AGES BELONGING TO THE DISTRICT.	
		Number.	Rate.*	DEATHS UNDER ONE YEAR OF AGE		DEATHS AT ALL AGES. TOTAL.					Number.	Rate.*
				Number.	Rate per 1,000 Births registered. 6	Number.	Rate.*					
1	2	3	4	5	6	7	8	9	10	11	12	13
1897.	54,630	1,748	31·9	349	199	1,037	18·9	95	54	74	1,057	19·1
1898.	55,550	1,772	31·8	329	183	1,005	18·0	113	55	105	1,055	18·9
1899.	56,500	1,809	32·0	337	186	1,164	20·6	96	57	105	1,212	21·4
1900.	57,450	1,827	31·8	373	204	1,156	20·1	91	35	120	1,241	21·5
1901.	58,556	1,837	31·4	337	183	965	16·4	82	34	123	1,054	18·0
1902.	60,000	1,949	32·4	302	154	1,043	17·0	101	37	133	1,139	18·9
1903.	60,800	2,010	33·5	325	161	1,015	16·6	113	39	132	1,108	18·2
1904.	62,000	1,918	30·9	346	180	1,051	16·9	85	32	135	1,154	18·6
1905.	63,134	2,079	32·9	321	153	983	15·5	109	33	147	1,097	17·3
1906.	68,000	2,171	31·9	312	143	1,039	15·2	89	33	171	1,177	17·3
Averages for years 1897-1906.	59,662	1,912	32·0	333	174	1,017	17·5	97	40	124	1,129	18·9
1907.	69,500	2,168	31·3	268	123	992	14·3	92	39	137	1,090	15·7

* Rates in Columns 4, 8, and 13 calculated per 1,000 of estimated population.

Area of District in acres, exclusive of area covered by water—1,946 at present; 1,576 at time of Census.
Total Population at all ages, 58,556; number of inhabited houses, 10,944; average number of persons per house, 5·8—at census of 1901.

The Union Workhouse is not within the District.

TABLE 2.—COUNTY BOROUGH OF BOOTLE.

CASES OF INFECTIOUS DISEASE NOTIFIED DURING THE YEAR 1907.

NOTIFIABLE DISEASE.	CASES NOTIFIED IN WHOLE DISTRICT.						TOTAL CASES NOTIFIED IN EACH LOCALITY.						No. OF CASES REMOVED TO HOSPITAL FROM EACH LOCALITY.					
	At all Ages.	At Ages—Years.					1 H*.	Stanley Ward.	Mersey Ward.	Knowsley Ward.	Innacre Ward.	Orrell Ward.	1 H*.	Stanley Ward.	Mersey Ward.	Knowsley Ward.	Innacre Ward.	Orrell Ward.
		Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 65.												
Small-pox	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cholera	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Diphtheria—Membranous Croup	52	2	24	20	1	5	19	13	4	5	8	3	14	7	2	4	6	3
Erysipelas	32	1	2	1	3	23	7	—	8	10	7	—	—	—	—	—	—	—
Scarlet Fever	257	3	91	147	9	7	60	41	56	25	51	24	48	22	44	20	46	20
Typhus Fever... ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Enteric Fever	42	—	5	10	7	18	6	2	5	13	16	—	5	2	5	13	14	0
Relapsing Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Continued Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Puerperal Fever	4	—	—	—	1	3	3	—	—	1	—	—	—	—	—	—	—	—
Plague	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Phthisis	7	—	—	—	—	7	—	—	—	3	2	2	—	—	—	—	—	—
Totals	394	6	122	178	21	63	95	56	73	57	84	29	67	31	51	37	66	23

82 deaths from Phthisis were reported by the Registrar.

TABLE NO. 3.—COUNTY BOROUGH OF BOOTLE.

CAUSES OF, AND AGES AT, DEATH DURING YEAR 1907.

CAUSES OF DEATH.	DEATHS IN WHOLE DISTRICT AT SUBJOINED AGES.							DEATHS IN LOCALITIES (AT ALL AGES).							DEATHS IN PUBLIC INSTITU- TIONS.
	All ages.	Under 1.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	Derby Ward.	Stanley Ward.	Mersey Ward.	Knowsley Ward.	Linacre Ward.	Orrell Ward.		
Small-pox	—	—	—	—	—	—	—	—	—	—	—	—	—		
Measles	16	4	12	—	—	—	—	2	1	3	3	3	4	Bootle Borough Hospital with non-residents	64
Scarlet Fever	7	—	5	2	—	—	—	2	1	3	—	1	—		
Whooping Cough	28	9	17	2	—	—	—	7	2	3	4	9	3	Bootle Borough Hospital without non residents	32
Diphtheria and Mem- branous Croup	14	1	10	3	—	—	—	4	3	2	1	2	2		
Fever { Typhus	—	—	—	—	—	—	—	—	—	—	—	—	—	Inf. Hospital with non-residents	28
Enteric	8	—	1	2	2	3	—	1	—	—	5	2	—		
Other Continued	1	—	—	—	1	—	—	1	—	—	—	—	—	Inf. Hospital with- out non residents	21
Epidemic Influenza	3	—	—	—	—	1	2	2	—	—	1	—	—		
Cholera	—	—	—	—	—	—	—	—	—	—	—	—	—		
Plague	—	—	—	—	—	—	—	—	—	—	—	—	—		
Diarrhoea	40	29	10	—	—	—	1	8	2	9	12	7	2	Walton and Mill Rd. Workhouses	137
Enteritis	28	10	10	1	—	3	4	4	2	5	10	5	2		
Marasmus and Manition	38	34	4	—	—	—	—	8	1	13	6	6	4		
Convulsions	25	20	5	—	—	—	—	3	2	14	1	4	1		
Puerperal Fever	3	—	—	—	1	2	—	—	—	—	2	—	1		
Erysipelas	1	—	—	—	—	1	—	—	—	—	—	1	—		
Other Septic Diseases	12	1	2	1	2	2	4	3	1	2	1	5	—		
Phthisis	82	—	—	9	25	47	1	14	11	13	11	30	3		
Other Tubercular Diseases	31	8	11	7	2	3	—	7	2	7	6	9	—		
Cancer, Malignant Disease	66	—	—	—	—	53	13	10	16	17	12	11	—		
Bronchitis	122	31	11	1	1	41	37	16	12	29	40	19	6		
Pneumonia	116	16	37	7	5	39	12	20	16	21	25	24	7		
Pleurisy	2	—	—	—	—	2	—	1	—	—	1	—	—		
Other Diseases of Res- piratory Organs	4	1	—	—	1	—	2	1	—	—	—	3	—		
Alcoholism	6	—	—	—	—	6	—	1	1	1	2	1	—		
Cirrhosis of Liver	3	1	1	—	—	1	—	—	—	1	1	1	—		
Veneral Diseases	44	44	—	—	—	—	—	8	2	10	9	9	6		
Premature Birth	8	—	—	—	1	7	—	—	2	1	4	1	—		
Diseases and Accidents of Parturition	61	2	—	7	2	38	12	15	7	14	11	13	1		
Heart Diseases	40	4	11	6	—	16	3	4	2	18	11	4	1		
Accidents	1	—	—	—	—	1	—	—	1	—	—	—	—		
Suicides	56	—	—	—	—	5	51	8	11	14	11	10	2		
Senile Decay	28	12	2	3	1	8	2	2	2	12	8	4	—		
Not Certified	196	41	14	9	10	92	30	33	34	43	33	46	7		
All other Causes	1090	268	163	60	54	371	174	185	134	255	234	230	52		

74 Inquests have been held during the year, 49 on residents and 25 on non-residents.

TABLE 4.—INFANTILE MORTALITY DURING THE YEAR 1907.

Deaths from Stated Causes in Weeks and Months under One Year of Age.

CAUSE OF DEATH.		Under 1 Week.	1-2 Weeks.	2-3 Weeks.	3-4 Weeks.	Total under 1 Month.	1-2 Months.	2-3 Months.	3-4 Months.	4-5 Months.	5-6 Months.	6-7 Months.	7-8 Months.	8-9 Months.	9-10 Months.	10-11 Months.	11-12 Months.	Total Deaths under One Year.
All Causes	Certified	44	15	12	5	76	27	17	20	18	14	16	17	13	14	9	12	253
	Uncertified	3	1	—	—	4	2	2	1	2	2	1	1	1	—	—	—	15
Common Infectious Diseases	Small-pox	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Chicken-pox	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1	4
	Measles	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—
	Scarlet Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	1
Diarrheal Diseases	Diphtheria: Croup	—	—	—	—	—	1	—	2	1	2	—	—	1	—	1	1	9
	Whooping Cough	—	—	—	—	—	1	2	3	4	—	3	7	4	4	—	1	29
	Diarrhea, all forms	—	—	—	—	—	1	1	1	1	1	1	—	1	1	1	—	9
	Enteritis (<i>not Tuberculous</i>)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Wasting Diseases	Gastritis, Gastro-intestinal Catarrh	1	—	—	1	2	1	1	2	1	—	—	—	—	2	—	—	9
	Premature Birth	30	5	3	2	40	5	1	—	2	—	—	—	—	—	1	—	46
Tuberculous Diseases	Congenital Defects	3	2	—	—	5	—	—	—	—	—	—	—	—	—	—	—	9
	Injury at Birth	1	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	1
	Want of Breast-milk	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Atrophy, Debility, Marasmus	2	5	4	—	11	9	2	2	2	1	3	1	2	—	1	4	33
Tuberculous Diseases	Tuberculous Meningitis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7
	Tuberculous Peritonitis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Tuberculous Mesenterica	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	1
	Other Tuberculous Diseases	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Erysipelas	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Syphilis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Rickets	—	—	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—
	Meningitis (<i>not Tuberculous</i>)	—	—	—	—	—	—	—	1	1	1	1	—	2	—	—	—	1
	Convulsions	7	2	—	1	10	4	4	2	2	1	3	—	—	1	—	2	29
	Bronchitis	—	—	2	—	2	4	7	3	6	2	2	3	—	1	1	1	32
	Laryngitis	—	—	—	—	—	—	—	2	—	—	1	—	—	—	—	—	3
	Pneumonia	—	—	—	—	—	—	—	1	—	3	1	2	2	2	3	2	16
	Suffocation, overlaying	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Deaths from all Causes at all ages 1,090.	Other Causes	3	2	2	—	7	1	—	2	—	2	1	1	2	1	1	—	19
	Births in the year—Legitimate, 2,146; Illegitimate, 22.	47	16	12	5	80	29	19	21	20	16	17	18	13	14	9	12	268

Deaths from all Causes at all ages 1,090.

Population, estimated to middle of 1907, 69,200.

Deaths in the year of { legitimate infants ... 259 illegitimate infants ... 9

BOOTLE CORPORATION INFECTIOUS DISEASES HOSPITAL.

STATISTICS FOR FIVE YEARS ENDED 31ST MARCH, 1908.

Year to 31st March.	1903-4.	1904-5.	1905-6.	1906 7.	1907-8.	Total for five years.
ANNUAL COST—	£	£	£	£	£	£
Ordinary expenditure..	3,069	2,467	2,723	2,957	2,851	14,067
Extraordinary expendi- ture.....	340	339	339	339	339	1,696
Principal and Interest...	415	406	397	387	378	1,983
	3,824	3,212	3,459	3,683	3,568	17,746
PATIENTS—						
Remaining from pre- vious year	59	33	20	46	29	59
Admitted during year..	460	288	350	405	314	1,817
Total treated.....	519	321	370	451	343	1,876
Remaining at end of year	33	20	46	29	20	20
No. of days residence...	19,492	12,767	14,962	18,499	14,408	80,128
Average daily number of patients.....	53·4	35·0	41·0	51·0	39·4	43·8
Average residence per patient (days).....	37·5	39·7	40·4	41·0	42·0	42·7
ORDINARY EXPENDITURE ONLY—						
Average cost per patient per day	s. d. 3 1·8	s. d. 3 10·4	s. d. 3 7·7	s. d. 3 2·3	s. d. 3 11·5	s. d. 3 6·1
Average cost per patient	£5 18 3	£7 13 8·5	£7 7 2·3	£6 11 1·6	£8 6 2·8	£7 9 11·6
Average cost per bed occupied per annum...	£57 9 5	£70 9 9	£66 8 3	£57 19 7	£72 7 2·5	£64 4 7·9
PRINCIPAL AND INTEREST AND EXTRAORDINARY EXPENDITURE—						
Average cost per day per patient.....	d. 9·3	s. d. 1 2·0	d. 11·8	d. 9·4	d. 11·9	d. 11·0
AVERAGE RESIDENCE CLASSIFIED AS TO DISEASE—	Cases. Days.	Cases. Days.	Cases. Days.	Cases. Days.	Cases. Days.	
Scarlet.....	349 43·6	241 44·9	306 43·7	350 44·6	264 45·8	
Enteric.....	35 33·2	25 32·6	17 26·7	42 32·3	36 35·3	
Diphtheria	58 25 1	52 20·4	45 25·0	56 25 3	43 24·5	
Smallpox	77 21·4	— —	1 12·0	— —	— —	
Other diseases	— —	3 20·0	1 2 0	3 32·0	— —	
	519 37·5	321 39·7	370 40·4	451 41·0	343 42·0	

Table No. 4.

1907.

LOCALITIES.	JAN.	FEB.	MAR.	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	TOTAL.	
	Un- der 1 up.	Un- der 1 up.	Un- der 1 up.	Un- der 1 up.	Un- der 1 up.	Un- der 1 up.	Un- der 1 up.	Un- der 1 up.	Un- der 1 up.	Un- der 1 up.	Un- der 1 up.	Un- der 1 up.	Un- der 1 up.	Un- der 1 up.
Aber Street	1	1	...	...	1	...	1	1	...	1	2	...	5	10
Addison Street	1	1
Aintree Road
Akenside Street	1	...	...	...	...	...	1	1	...	1	2	6
Albany Place
Albert Drive
Alexandra Dock	1	1	...	...	...	...	...	...	2	2
Alexandra Drive	1	1
Alma Vale Terrace
Alt Road	1	1
Altcar Road	2	...	...	...	...	...	...	...	1	2	3
Ampton Place
Annie Road	...	1	...	...	...	...	...	...	...	...	1	...	1	2
Antonio Street	...	2	...	...	1	1	2	1	...	...	...	...	1	6
Armstrong Street	1	...	1	...	...	...	...	...	...	...	1	...	4	7
Aretie Road
Arvon Street	...	1	...	...	...	...	...	...	...	...	...	...	2	2
Ash Street	...	1	...	...	...	...	...	...	...	...	...	...	1	2
Ashcroft Street	1	...	...	...	...	...
Atlantic Road
Atlas Road	4	2	...	2	...	1	...	2	3	1	1	2	8	25
Audley Street	...	1	...	...	...	...	...	...	...	...	...	...	1	1
August Street
Bala Street	2	1	...	1	...	1	...	...	...	...	2	...	7	7
Balfour Avenue
Balfour Road	1	...	...	...	...	...	...	...	...	1	2	2
Balliol Road	1	...	...	1	1
Balliol Terrace
Baltic Road
Bangor Street	...	1	...	1	...	1	...	...	...	2	1	1	3	10
Bank Cottages	...	1	...	...	...	...	...	...	...	...	...	...	1	1
	8	11	2	3	2	1	2	3	4	4	5	6	27	92

LOCALITIES.	JAN.		FEB.	MAR.	APRIL.	MAY.	JUNE.	JULY.	AUG.	SEPT.	OCT.	NOV.	DEC.	TOTAL.													
	Un- der 1	1 up.												Un- der 1	1 up.												
Bank Road	1	..	..	2	1	..	2	1	..	2	..	1	2	2	11										
Beattie Street	13												
Beatrice Street	1	..	..	..	..	..	..	..	..	1	1	..				
Beck Road	2	3	1	9												
Benedict Street	1	..	..	..	..	1	1	2	1	..	..	..	1					
Bedford Place	..	4	..	2	1	1	..	..	..	..	..	..	3	2	16						
Bedford Road	..	1	..	..	..	..	..	..	..	..	..	2	3	..	1			
Beech Street												
Benbow Street												
Bennett Street	..	2	..	2	..	..	..	1	1	..	1	3	..	2	11									
Berry Street	1	..	..	..	..	1	..	..	..	..	..	1	7			
Berwick Road	..	2	1	1	..	1	1	1	2	..	1	..	..	2	6										
Bianca Street	..	2	..	..	..	..	..	..	..	1	..	..	..	3	2		
Bibby's Lane	..	1	2	1	..	..	..	..	..	..	..	1	1	..	..										
Blair Street	1	..	..	..	..	..	..	..	..	..	..		
Blake Street	1	..	2	..	..	..	..	3								
Blossom Street	1	4	1	2	..	..	3	10										
Boreland Street	1	..	2	1	1	..	1	1	..	..	..	..	..	..	2						
Boston Street	..	2	..	..	..	..	..	2	..	..	..	2	1	..	7				
Goswell Street	..	1	..	..	1	..	1	1	..	..	1	1	1	4	4								
Bowles Street	..	1	2	..	1	..	..	..	..	..	1	..	..	1	5					
Brasenose Road	..	1	..	1	1	1	1	1	..	..	..	..	..	..	1						
Breeze Hill												
Bridge Street												
Brindle Road	1	..	2	3												
Brook Road	..	4	1	1	3	..	1	..	..	2	1	1	1	3	12										
Brookhill Road	1	1	..	..	..	..	..	..	..	..	..	..	..	
Browne Street	1	..	..	..	..	1	..	..	..	..	1	1	6				
Browning Street	..	1	1	1	..	..	1	1	..	..	2	..	..	..	2					
Bullen's Terrace	..	1	..	..	..	..	..	..	..	..	1	..	1	1	2				
Bulwer Street	1	..	..	..	..	..	..	..	..	..	4				
Burns Street	1	..	..	..	..	..	2	..	..	..	..	..							
	2	30	5	20	6	13	5	12	3	6	4	18	3	14	5	10	4	15	7	16	8	23	4	20	56	196	252

1907.

LOCALITIES.	JAN.	FEB.	MAR.	APRIL.	MAY	JUNE.	JULY.	AUG.	SEPT.	OCT.	NOV.	DEC.	TOTAL.														
	Un- der and 1 up.												Un- der and 1 up.														
Byng Street	...	1	...	...	...	...	...	...	...	...	...	2	1	2				
Byron Street													
Cambridge Road	1	...	...	1	...	1	...	...	...	2								
Camden Street	2	...	...	...	3										
Campbell Street	...	1	...	...	...	...	...	...	1	1	1	1	2	3							
Canal Street	2	2	1	...	...	...	...	...	1	2	...	...	4	7						
Canal View	1	...	...	...	...	...	...	...	...	...	...	...	1	...		
Captain's Lane													
Carolina Street	1	...	...	...	...	...	...	...	...	...	...	1			
Cedar Street	1	1	...	...	...	...	...	...	...	1	1						
Chapel Street	1	...	...	...	...	...	...	...	...					
Chaucer Street	1	...	2	...	1	1	...	1	...	5													
Chesnut Grove	...	1	...	...	...	...	...	1	1	1	...	...	1	10						
Church Road	1	...	...	1	...	...	...	...									
Church Street	...	2	...	1	...	...	...	...	1	...	...	...	...	8					
Church View	1	1	...	...	...	...	...	...	...	1	1						
Cinder Lane	1	...	...	...	...	...	...	...	...	...	...			
Clare Road	1	...	1	...	...	...	1	...	...	...	1							
Clifford Street	...	1	...	1	...	...	...	...	...	1	...	...	...	1					
Coleridge Street	1	1	...	...	...	2										
College View													
Collins Street	1	1	...	1	1	...	...	...	...	2	3									
Concord Place	1	1	...	...	...	2	1	...	1	5										
Conway Street	...	1	...	...	...	...	...	...	1	...	...	...	...	1			
Cornwall Street													
Cowper Street	...	1	1	1	1	1	1	...	...	...	...	2	3	5									
Cranworth Street	2													
Crete Street													
Cross Terrace	...	1	...	...	...	...	...	...	...	...	...	...	...	1		
Cross Street, No. 2													
Cross Place													
	6	37	7	26	7	16	8	19	5	12	4	23	3	20	6	12	7	21	8	29	10	25	7	26	78	266	344

1907.

LOCALITIES.	JAN	FEB.	MAR.	APRIL.	MAY.	JUNE.	JULY.	AUG.	SEPT.	OCT.	NOV.	DEC.	TOTAL.									
													Un- der 1	1 and up.								
Fire Station	...	...	1	...	...	...	...	...	...	...	...	...	...	1
First Street	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Flint Street	...	...	...	...	...	...	...	...	1	...	...	1	...	...						
Florida Street	1	1	...	...	...	...	...	...	...	...	...	...	1	2
Formby Place	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Garden Lane	1	...	...	...	...	...	1	...	...	1	...	...	1	2
Garfield Street	...	...	1	...	...	...	...	1	...	...	...	...	1	2
Globe Road	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gloucester Road...	1	1	1	...	2	1	1	1	...	1	...	...	3	9						
Glynn Street	1	1	...	...	...	1	1	...	...	...	...	1	3	3	
Goldsmith Street...	...	...	1	...	...	...	...	...	...	...	...	...	1	...
Gonville Road	...	1	...	1	...	...	...	...	1	...	...	1	...	4		
Gower Street	...	...	...	...	1	1	...	...	2	...	2	1	...	1		
Gray Street	...	...	...	...	...	...	...	...	...	...	...	...	3	6
Grimshaw Street...	...	...	...	1	...	...	...	...	...	...	1	...	...	3
Grove Street	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Halsall Road	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Hamlet Street	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Hawthorne Road..	1	4	2	...	2	1	4	1	2	1	...	2	3	18								
Hemans Street	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Hemer Place	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Hemer Terrace	...	...	1	...	...	...	...	...	...	...	...	...	...	2
Henry Street	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Hermitage Grove	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Hertford Road	...	1	...	1	1	...	...	...	1	1	...	...	...	6		
Hero Street	...	...	...	1	1	1	...	...	...	...	1	...	...	4
Holly Street	...	...	...	...	...	...	...	...	...	...	2	...	...	2
Holywell Street..	2	...	...	...	1	2	...	...	1	...	2	...	...	6	
Hood Street	...	...	1	...	...	...	1	1	...	1	...	...	2	5	
Hooton Place	...	...	1	...	...	...	...	...	...	...	...	...	...	2
	8	56	8	38	12	26	10	25	10	23	7	30	5	35	11	18	36	10	42	124	400	524

LOCALITIES.	JAN.	FEB.	MAR.	APRIL.	MAY.	JUNE.	JULY.	AUG.	SEPT.	OCT.	NOV.	DEC.	TOTAL	
	Un- der 1	1 up.											Un- der 1	1 up.
Morningside Road	..	1	..	1	..	..	..	..	..	1	..	..	..	3
Moss Lane	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Mount Avenue	..	..	..	..	..	..	..	..	..	..	1	..	..	1
Napier Street	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Nelson Street	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Nevada Street	..	1	..	..	..	..	1	..	..	1	..	..	2	4
New Street	..	..	..	..	..	..	..	..	..	..	1	..	1	1
Norfolk Street	..	..	..	..	..	..	..	..	..	..	1	..	1	1
Norton Street	..	..	..	..	1	..	1	..	..	..	1	..	3	3
Oak Street	..	..	..	..	..	..	..	1	1	2	..	..	1	2
Olivia Street	..	3	..	..	1	..	3	..	1	1	..	..	5	18
Oregon Street	..	..	..	..	..	1	1	..	1	..	..	..	2	3
Oriel Road	..	1	..	..	..	..	..	1	..	..	..	..	..	3
Orlando Street	..	1	1	1	1	..	2	..	..	1	1	..	2	9
Orrell Lane	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Orrell Road	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Orrell Village	..	..	..	..	..	..	..	1	1	1	..	..	1	3
Oxford Avenue	..	..	..	..	1	..	..	..	..	..	..	..	..	1
Oxford Road	..	1	..	..	..	..	..	1	..	..	..	..	..	2
Pacific Road	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Park Grove	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Park Lane..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Park Place	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Park Street	..	1	1	..	..	..	..	..	1	..	2	..	3	6
Peel Road..	..	1	..	2	1	..	..	..	..	1	..	1	5	6
Pembroke Road..	..	..	1	..	..	..	..	..	..	..	..	..	1	1
Percy Street	..	1	..	4	1	..	..	..	..	1	..	..	7	8
Pine Grove	..	1	..	..	..	..	..	..	..	..	..	..	2	2
Pleasant Grove	..	..	..	..	1	..	..	..	..	..	..	..	1	1
Pleasant Place	..	..	..	..	..	..	..	..	..	..	1	..	..	..
Pleasant Street	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	12	86	19	47	13	40	53	39	23	42	24	18	60	846

LOCALITIES.	JAN.	FEB.	MAR.	APRIL.	MAY	JUNE.	JULY.	AUG.	SEPT.	OCT.	NOV.	DEC.	TOTAL.														
	Un- der 1 up.												Un- der 1 up														
Pleasant View ..	2											2	4														
Pope Street ..	1			1									1														
Princes Street ..																											
Prior Street ..		1																									
Province Road ..													1														
Queen's Road ..	1	1	1			1	1				1	1	6														
Raleigh Street ..	2				1					1			4														
Recreation Street ..	1		1						1				3														
Regent Road ..			2		1					1	1		6														
Rhyl Street ..	1	1					1		1				4														
Richmond Grove..													2														
Rimrose Road ..				3			1	1	1																		
Roby Street ..												2	3														
Rodney Street ..											1		3														
Ruford Road ..	1																										
Rutland Street ..																											
St. Alban's Road..	1			1			1		1				2														
St. Alban's Square													1														
St. Andrew's Road								1																			
St. Catherine's Road					1																						
St. Edmond's Road									1				1														
St. John's Road ..		1	2						1		3	1	9														
St. John's Terrace																											
Sandfield Place ..																											
Sandy Lane ..								1	2				3														
Salisbury Road ..		1											1														
Scott Street ..			1		1		1						4														
Seafeld Road ..												1															
Seaview Road ..																											
Second Street ..				1			2						3														
				1									2														
	13	95	12	66	21	53	13	47	21	53	12	42	16	57	18	41	24	49	29	67	26	61	18	68	223	699	920

LOCALITIES.	JAN.	FEB.	MAR.	APRIL.	MAY.	JUNE.	JULY.	AUG.	SEPT.	OCT.	NOV.	DEC.	TOTAL.	
	Un- der 1 up.												Un- der 1 up.	
Seaforth Street ..	1	...	1	...	...	2	1	...	...	1	...	1	2	6
Seymour Street
Shakespeare Street	1	...	...	...	...
Shelley Street	2	...	...	...	...	1	1	...	1	3	6
Sheridan Place	3	...	...	1	...	...	3	1
Shore Road
Sidney Road	1	...	...	...	...	...	...	...	...	...
Smollet Street ..	1	...	...	1	...	...	1	...	...	...	...	...	3	3
Smynua Road
Southey Street	1	...	1	...	2	...	...
Somerset Road	1	...	...	...	...	...	...	1	1	5
Speke Place
Spenser Street	1	...	...	1	...	...	1	2	1
Spring Grove	1	...
Springwell Road..	1	...	...	...	...	...	...	...	...	...	...
Stafford Street	1	...	...	...	...	...	...	...
Staley Street	2	1
Stanley Road	3	...	1	...	1	...	1	1	2	2
Strand Road	1	...	1	...	1	3	1	11
Suffolk Street ..	1	1	1	1	...	...	...	...	...	...	...	...	...	1
Summersent
Surrey Street	2	...	1	...	...	...	1	...	...	3	6
Sussex Street	1	1
Talbot Street	1	...	...	...	...	...	...	...
Tattersall Place ..	1	...	...	...	...	...	...	...	1	...	...	...	1	1
Tennyson Street ..	1	...	...	1	...	2	...	...	1	...	1	...	1	2
Thornton Road	1	...	...	1	...	...	3	12
Titan Street	1	4
Trent Street
Trinity Road	1	...	...	...	...	1	...	...	1	...
Tudno Street	1	...	...	1	...	...	...	...	4	5
Tudor Street	1	...	...	...	...	1	2	2
	16	100	13	72	23	47	64	18	29	34	29	18	770	1026

BOROUGH OF BOOTLE.

ESTIMATED POPULATION, 69,200 (1907)

Birth Rate (blue) } *Per 1000 of the estimated*
Death Rate (black) } *Population*
Number of Deaths of Infants under one } *in each of the*
year out of every 1000 born (green) } *Wards of the*
Estimated Population per acre, excluding } *Borough during 1907*
Dock Quays (red)

ORRELL WARD
ESTIMATED POP. 3,943

36.7
13.1
158
10

DERBY WARD
ESTIMATED POP. 12,603.

34.8
14.6
104
27

STANLEY WARD
ESTIMATED POP. 11,687.

21.3
11.4
64
4.9

LINACRE WARD
ESTIMATED POP. 14,213.

37.1
16.1
113
70

KNOWSLEY WARD
ESTIMATED POP. 12,177.

35.5
19.2
125
69

MERSEY WARD
ESTIMATED POP. 14,577.

25.6
17.4
183
83

—1907—

Birth rate for Whole Borough.....31.3
Death rate.....do.....15.7
Infant Mortality.....123

THE BOROUGH OF BOOTLE INFECTIOUS DISEASE CHART FOR THE YEAR 1907.

